THE UNIVERSITY OF ALBERTA

A Survey of Agricultural Land Purchasers in Alberta, 1981

by

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Abstract

This study discloses information on the nature of participants in the 1981 Alberta agricultural land market; outlines the nature of purchasers' stated buying motivations; assesses some of the institutional and economic factors affecting the market for agricultural land in Alberta; and checks the accuracy of published information on the agricultural land market.

A total of 948 responses were obtained, for a response rate of 51.5 percent, from the individuals randomly selected from the listing drawn up by Alberta Municipal Affairs from the land title changes recorded by the Alberta Land Titles offices, to receive a copy of the 1981 Alberta Land Survey. Approximately half of these respondents were involved in a land transfer for the purpose of purchasing agricultural land in Alberta in 1981. These individuals provided the bulk of the information for the study.

In the analysis of the results of the survey, two predominant characteristics of agricultural land purchasers emerged. The first characteristic concerned the low average age of respondents relative to that of 1981 census-farm operators in Alberta. The relatively young age of the respondents influenced other age-related variables. The respondents had, on average, more years of education, fewer years of farming experience, and owned less farmland than did 1981 census-farm operators. They also had a tendency to obtain concessional financing from AADC to assist them in the purchase of agricultural land.

The second characteristic concerned the occupation of respondents. A relatively large number of purchasers were farmers or ranchers and they tended to reside on farms in Alberta and to purchase agricultural land in order to farm it. A significant number of respondents who resided in urban areas also gave farming as their occupation.

A detailed analysis, which employed an index computed on respondents' stated reasons for purchasing and selling land, indicated that most groups of purchasers bought land to expand their existing farming operation, to increase their farm income, to establish their own farm, and because the price was good. Those respondents who did not have an agricultural occupation tended to place somewhat more emphasis on the purchase of land for investment reasons, as a hedge against inflation, and to move away from a city or town. This group of respondents also placed more emphasis on speculation as a reason

for the sale of agricultural land.

The influence of other types of purchasers is concluded to have been minimal. Hutterite colonies and non-residents of Alberta, in particular, comprised a small portion of the sample and their overall effect on the agricultural land market is felt to have been minimal.

The notion of the "ripple effect" was examined in the study. Respondents who sold land and made a subsequent purchase within the next calendar year were analyzed in terms of their reasons for buying and selling land and the locations of purchased and sold land. The importance of a good purchase price, a desire to move or change operations, and the unimportance of expropriation and urban expansion as reasons given by the respondents for buying and selling land, do not support the general notion of the "ripple effect".

The study provides a view of the purchasers of agricultural land in Alberta in 1981. This type of information should provide a sound basis for continued research in this topic area.

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I. INTRODUCTION

Substantial increases in the price of agricultural land in Alberta were evident from 1970 to mid-1981. These price increases may have had an effect on the agricultural land market in Alberta. The major problem at which this study is directed is the lack of information on participants in the agricultural land market in Alberta and, therefore, the purpose of this study is to secure information on transferees of Alberta agricultural land. In particular this study seeks information on the nature of participants, specifically land purchasers, in the market for farmland in Alberta and on the nature of buyers' stated motivations for their purchases. Some institutional and economic factors affecting the market for Alberta farmland will also be assessed in light of this information.

A. A Background Discussion

Table I.1 illustrates the rapid rise in price levels, in both real and nominal terms, of agricultural land in Alberta between 1971 and 1981. In 1971, the average value of agricultural real estate in the province was $67.32 per acre. In 1981, the average land value was $443.95 per acre. Between 1971 and 1981 the purchasing power of the Canadian dollar dropped from the 1971 base figure of $1.00 to $.42. In real terms, then the average value of one acre of agricultural real estate in Alberta increased $119.14 (177 percent). In nominal terms the increase was $376.53 (560 percent) per acre.

A variety of occurrences may have had some influence on the increase in Alberta agricultural land prices in the 1970s. Changes in the economic condition of the country and the province and changes in the attitudes of their citizens may have had an effect on the agricultural land market in Alberta. In the early 1970s, the international grain market was recovering from a depression. That recovery saw grain and oilseed prices reach all-time peaks, in both nominal and real terms, by 1972. Buoyant market conditions continued through the remainder of the 1970s. Accelerating inflation during this time forced interest rates up and consequently, the cost of borrowing money increased as well. Table I.1 illustrates the changes in interest rates and the Consumer Price Index between 1971 and 1981. The changing interest rates and rate of inflation apparently made it beneficial for Canadians and Albertans to invest in real assets, either with their own or borrowed money. General discussion, for example in the popular press, dealing with

TABLE I.1: Average Annual Bank Rate Values; Average Nominal and Real, Real Estate Values and Changes; and CPI Values and Changes:1971-1981

YEAR	AVERAGE ANNUAL BANK RATE*	AVERAGE NOMINAL AGRICULTURAL REAL ESTATE VALUE**		AVERAGE REAL AGRICULTURAL REAL ESTATE VALUE**		CONSUMER PRICE INDEX***	
	% per annum	$ per acre	% change from previous year	$ per acre	% change from previous year	CPI value	% change from previous year
1971	5.2	67.3	N/A	67.3	N/A	100.0	N/A
1972	4.75	83.1	+23.5	79.3	+17.8	104.8	+4.8
1973	7.25	91.7	+10.3	81.4	+2.6	112.7	+7.5
1974	8.5	118.9	+29.7	95.1	+16.8	125.0	+10.9
1975	8.5	144.8	+21.8	104.5	+9.9	138.5	+10.8
1976	9.3	177.4	+22.5	119.1	+13.9	148.9	+7.5
1977	7.4	213.4	+20.3	132.7	+11.4	160.8	+8.0
1978	9.0	269.1	+26.1	153.6	+15.7	175.2	+9.0
1979	12.1	323.8	+20.3	169.3	+10.2	191.2	+9.1
1980	12.9	385.6	+19.1	183.1	+8.2	210.6	+10.1
1981	18.0	443.9	+15.1	187.4	+2.3	236.9	+12.5

*Calculated from figures in Bank of Canada, *Bank of Canada Review*, (Ottawa: Bank of Canada, Selected Issues), p. S52.
**Source: Melville D. Miller *1981 Agricultural Real Estate Values in Alberta 1981*, (Edmonton, Alberta: Alberta Agriculture, Resource Economics Branch, August 1982), p. 28.
***Source: Bank of Canada, *Bank of Canada Review* (Ottawa: Bank of Canada, Selected Issues), p. S52.

the characteristics of buyers of agricultural land and their effects on the agricultural land market focuses on four main groups. There is a popular view that foreign buyers may see land in Alberta, particularly high quality farmland, as a means of protecting the value of their capital against inflation, currency devaluation, and possible taxation or confiscation by their own governments. Some individuals claim that the wealth that is often attributed to foreign investors allows foreigners to outbid competitors for agricultural land in the market, thereby forcing prices up beyond what the market would normally dictate. It is unclear whether these buyers had any influence or effect on the agricultural land market in Alberta in 1981.

Farmland may be bought by speculators as a hedge against inflation or as a tax shelter. The term "speculator", however, is difficult to define since it may include a wide variety of individuals. Speculators are, in general, said to buy land with a view to selling it for a profit. This is why they may be accused of waiting to sell their land at a profit to newly arriving buyers from outside the local rural market. The influence of these buyers on the market in Alberta is also unclear.

Rural land may be bought by urban developers. Many studies have shown that the payoffs for converting rural land to urban uses can be substantial. Accordingly, per acre price of agricultural land may increase as distance to an urban center decreases. The possibility of urbanization may also affect how rural land is used. Land slated for future urban use may be held idle or it may be farmed less intensely, with no long term investments by its owner to retain productivity.

Rural land may also be purchased by recreational and amenity developers. Urban dwellers may be "pulled" to the country by scenery and recreational attractions and by a desire to escape from the cities. Development may be in the form of commercial recreation sites or second home sites for private recreation. The role of developers in the farmland market in Alberta is uncertain.

Farmers may purchase the largest percentage of farmland sold in Alberta. For this reason, they may exert more influence on the agricultural land market than the other types of buyers discussed. They may also experience a wider variety of problems and be influenced themselves by a wider variety of factors.

Technological advances in the agricultural industry may have had a significant impact on the amount of land that each farmer can farm. Changes in the method of production resulting from larger and improved mechanical and pesticidal inputs, and a more extensive use of fertilizers, better seed, and improved farm management may also have had an affect on the amount of agricultural land a farmer can effectively handle. If net revenue is greater as a result of the changes described above, then it may become profitable for existing farmers to purchase additional farmland to enlarge their operations. It should also be noted, however, that farmers may be moved by speculative motives as well as technological ones.

Increases over time in farmland prices, allied with economies of scale, may force more farmers to look for acceptable alternatives to owning land. Both established and beginning farmers may be turning increasingly to land rental to increase the size of their operations. Between 1951 and 1981 the proportion of census-farm operators who rented some land for their operation increased 5.2 percent. During the same time the number of full-tenant operators decreased and the number of part-owner, part-tenant operators increased[1]. These statistics help to show what the changes in the tenure arrangements have been in Alberta. Some of these changes may have been due to increasing prices for agricultural land and possible changes in economies of scale. Any increased demand for land to rent may be met by buyers in the farmland market, by retired individuals, or by absentee landowners.

Increased prices for farmland may add to the pressures on some farmers to turn to alternative sources to improve their bidding potential. There may be a need for some farmers to have some form of off-farm income. Off-farm income may be used to supplement farm income or to improve a cash flow position, both of which may be strained with an agricultural land purchase.

Farmers may also use the increased equity base in land already owned (through rising land prices) to acquire additional land. Existing property may be used as security for loans to purchase new property. This security may influence the amount of capital that can be borrowed and, therefore, the amount that can be bid for a parcel of land.

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[1]Statistics Canada, *1981 Census of Agriculture, Alberta* (Ottawa: Statistics Canada, 1981), p. 13-1.

High interest rates may influence nominal agricultural land prices and consequently this may also affect the bidding potential of farmers. Rapidly changing interest rates may force credit institutions to favor loans with floating interest rates or shorter fixed rate terms. These reactions may influence the ability of borrowers to meet their cash flow requirements and may generally add to the risk involved with a farmland purchase. Some special financial considerations are available through the provincial and federal governments for individuals having certain qualifications. There has been some speculation that these special considerations may become added to the purchase price of the property if they are capitalized into the bids of prospective purchasers.

Changes in the levels of prices of agricultural land which occurred in the 1970s may also have influenced the sellers of agricultural land. In particular, what is popularly called the "ripple effect" may have occurred. A possible ripple effect is hypothesized to result from urban pressure on farmland use and to result in consequent higher prices for farmland in other areas. Such an effect might stem from farmers selling agricultural land near cities, at relatively high prices. These farmers may have had a competitive advantage in purchasing other property. If a farmer, for example, sells his land in an urban area for a high price, and buys other land in a lower priced market, he can afford to pay a higher price than the present value of the agricultural use of the land might indicate and, therefore, he can outbid other farmers.

Since 1981, land prices have moderated somewhat[2]. The agricultural real estate market appears to be quite depressed. There may be land for sale but very few transactions are taking place relative to previous years. In some cases people may want to sell but they are unwilling to accept a lower asking price[3]. The rapid rise of land values in the 1970s, the uncertainty of the course of land values in the 1980s, and the desire of landowners to maintain land values are forces which signify a need by farmers, credit institutions, policy-makers, and the general public for more information on the factors and issues affecting the farmland market in Alberta.

The above discussion indicates the need for a detailed study of the market for agricultural land in Alberta. The study should yield the benefits of improved understanding

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[2] Dave Wreford, ed., "A Downer for Land Prices", *Country Guide; the Farm Magazine*, November 1982, p. 27.
[3] Ibid.

of the economic forces associated with major changes in the prices of farmland. Information on the nature and major economic motivations of participants in the market for agricultural land is anticipated. Finally, an outline of economic and social consequences resulting from major economic changes in prices of farmland will be presented.

B. Objectives of the Study

The objectives of this study are to:

1. elicit information on the nature of participants in the 1981 Alberta agricultural land market,
2. determine the nature of purchasers' stated buying motivations,
3. assess some of the institutional and economic factors affecting the market for agricultural land in Alberta, and
4. check the accuracy of published information on the agricultural land market to the survey results.

C. Organization of the Study

This study consists of seven chapters as well as appendices and bibliography. Chapter One discusses the problem and describes the objectives of the study. Chapter Two provides a review of eight studies employing survey techniques. In this chapter, concentration centers on results of previous surveys on rural real estate markets in the United States and Canada. Relevant literature is also reviewed in Chapter Three but this discussion is in terms of the basic hypotheses to be proved or disproved by the study. These hypotheses were formulated on the basis of the objectives of the study and corresponding expectations drawn from the literature and a priori information. Chapter Four discusses methodology in terms of the questionnaire design, population determination and sampling technique used in the study. Chapter Five presents the results of the survey and Chapter Six provides some analysis and discussion of these results. Chapter Seven develops conclusions, including implications and limitations, from these results and lists some recommendations.

II. THE MARKET FOR RURAL LAND: REVIEW OF THE LITERATURE

A. Introduction

There are a few Canadian studies which provide limited information on agricultural real estate markets in Canada but there does not appear to be any extensive study of this market in Canada except for documentation of the nature and extent of farmland price changes. Many of the studies originating in the United States on the market for farmland deal with the agricultural real estate market in a particular state or in specific counties within a state. In these studies, local conditions and practices tend to have a great influence on the information collected. Studies using United States data tend to obtain their information from farmers and individuals commonly involved in real estate transactions. The discussion that follows describes those American and Canadian studies which employed primary data.

B. Studies of Rural Real Estate Markets in the United States

The Rural Land Market in Wayne County, New York

In 1974 a study of the rural land market in Wayne County, New York was conducted by William R. Bryant[4]. He used a three-part approach in his study. First, he determined changes in the level of rural land market activity (number of transfers of five acres or more) and rural real estate prices. Second, he determined the type of land that was being transferred, and third, he assessed why rural land was being purchased and what type of people were purchasing it. The study results were expected to be influenced by the major urban concentration in the study area.

Bryant conducted a detailed study of parcels of rural land transferred between January 1, 1972 and March 31, 1973. He used public land records and included parcel sizes of five acres or more. Effort was taken to eliminate all non-armslength sales from the study. A sample of the acceptable parcels was taken and all of the buyers of these parcels were interviewed. Using a questionnaire, information was gathered to determine buyer motivations for acquiring rural land, buyer attitudes towards certain rural land use

[4]William R. Bryant, *The Rural Land Market in Wayne County, New York* (Ithaca, New York: Cornell University, Department of Agricultural Economics, August 1974), pp. 48-50.

issues, and buyer characteristics.

Bryant grouped the buyers in the sample into three classifications: farmer buyers (15 percent); non-farm resident buyers (59 percent); and non-farm absentee buyers (26 percent). Of the farmer buyers, 50 percent were commercial farmers who purchased land for farming; 10 percent bought land to start farming; and 40 percent bought land to enlarge their operation. The average age of the farmer buyers in the sample was 40 years while that of the commercial farmers in this group was 52 years.

Those respondents who lived or planned to live on or adjacent to the parcel which they purchased were classified as non-farm resident buyers. These landowners stated "country living" most frequently as a primary reason for land acquisition. Rural tranquility, the opportunity to raise a garden and some livestock, and the belief that land is a good investment made the purchase of rural land for country living more attractive. Some of the non-farm resident buyers bought parcels adjacent to parcels they already owned to prevent their being put to undesirable uses. Some of these buyers intended to use their new acquisitions for recreation and hobbies. Most of the non-farm resident buyers were partially motivated by the fact that they considered land a safe hedge against inflation. The average age of the non-farm resident buyers was 38 years. Sixty percent of them had some college education; 19 percent had completed post-graduate work.

Those respondents who did not live or plan to live on or adjacent to the parcel they purchased were classified as non-farm absentee buyers. Seventy-seven percent of these buyers purchased land for investment purposes and intended to sell the property, at some point in time, for a profit. Nineteen percent of the non-farm absentee buyers in the sample purchased land for development. Four percent of this buying group acquired land for hobby or recreational purposes.

The non-farm rural buyers in the sample were concerned that good farmland be kept in farming, that the charm and beauty of rural areas be preserved, and that such measures as property tax relief for farmers, public planning to control urban development, and agricultural zoning be employed to control land use.

Bryant's study centers mainly on non-farm demand as an important factor in the rural land market. He notes a strong interest in rural land for country living, recreation, and investment in his study. There has been a dispersion of non-farm people into the

countryside in Wayne County since the 1950s and Bryant's study indicates the transfer is continuing. Non-farm rural land buyers in his study were willing to travel long distances between their homes and places of employment in order to live in low density single family housing. Bryant suggests the consequences of this influx are rising rural land prices and a displacement of farming from good farmland in some areas.

An Economic Analysis of the Western Oklahoma Land Market

In 1979 Lonnie R. Vandeveer completed a study of the western Oklahoma agricultural land market[5]. This study was partly dedicated to determining the structure and characteristics of buyers in this market. Vandeveer mailed a land market questionnaire to over 1,100 individuals who bought land, during the period from January, 1972 through June, 1978, in six Oklahoma counties.

Vandeveer found that most of the agricultural land in his sample was purchased for farming purposes. Fifty-eight percent of the land buyers were full-time farmers; 25.4 percent were part-time farmers. Nearly 86 percent of the respondents listed "establishing a farm" and "expanding farming operations" as the primary reasons for purchasing land in the area; 10 percent purchased land for investment related reasons. Vandeveer suggests this reflects the recognition of land as an investment and a possible hedge against inflation by non-agricultural investors.

It is interesting to note the sellers' reasons for selling their land as provided by the buyers of that same land. The most frequent reasons cited were "estate settlement" and "retirement". A less common response given was "financial difficulties experienced by the vendor". Vandeveer suggests that cash flow and land repayment problems for previous land owners may have been caused by high land values and the high costs associated with farming.

The largest number of buyers were farmers who were expanding operations but most of the land buyers were smaller landowners (480 acres of land or less). Vandeveer suggests that the majority of land buyers in his sample had anticipated future growth in size through previous machinery purchases. He mentions the economies of scale

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[5]Lonnie R. Vandeveer, "Characteristics of Western Oklahoma Agricultural Land Buyers," *Current Farm Economics*, 53 (March 1980), pp.16-21, citing Lonnie R. Vandeveer, "An Economic Analysis of the Western Oklahoma Agricultural Land Markets," (Ph.D. dissertation, Department of Agricultural Economics, Oklahoma State University, 1979).

introduced when machinery costs are spread over more acres.

Vandeveer anticipates that if more non-farmers were to bid for agricultural land as a hedge against inflation and the economic incentives for farm expansion were to continue, upward pressure on agricultural land values would occur. He further notes that the positive attitudes towards purchase and ownership of agricultural land, indicated by the large number of satisified land buyers and the large portion of land buyers who indicated they planned to purchase more land, are expected to increase the competitiveness in future agricultural land markets.

Rural Oklahoma Landownership Patterns

In 1981 Linda Lee conducted a study of landownership patterns in rural Oklahoma[6]. She found there was a lack of knowledge about the identity and motivations of many rural landowners, especially the non-traditional owners. It is important to note that this study deals specifically with land owners, not with agricultural land purchases.

Using information obtained from the Soil Conservation Service in the United States and the results of over 1,100 questionnaires submitted to landowners, Lee cross-classified size of holdings, type of owner, occupation of owner, and residence of owner with cropland, pasture, range, and forest land use. Lee found that 40 percent of the landowners in her sample were sole proprietors and 49 percent were family partnerships. Farmers constituted 38 percent of the sample; retired individuals, 17.1 percent; white collar workers, 13.7 percent; and corporations and estates, 10.5 percent. Over 70 percent of the respondents lived in the same county as the land they owned; 11.4 percent lived in the same state, but not the same county; 10.6 percent lived in another state. Lee suggests that knowledge of the dynamics of landowner patterns can best be obtained by periodic, updated land use – landownership inventories.

Nebraska Farm Real Estate Market Developments in 1981-1982

Bruce Johnson and Ronald Hanson surveyed individuals considered to be knowledgeable about the farm real estate market in their area of Nebraska.[7]

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[6]Linda K. Lee, "Rural Oklahoma Landownership Patterns," *Oklahoma Current Farm Economics*, 55 (March 1982): pp.13-20.

[7] Bruce B. Johnson and Ronald J. Hanson, *Nebraska Farm Real Estate Market Developments in 1981-82* (Lincoln, Nebraska: University of Nebraska-Lincoln, July 1981),

For the year ending February 1, 1982, the authors suggested that "farm expansion" was the major reason for farmland purchase. "Investment" was considered to be of secondary importance as a reason for such a purchase. "Estate settlement" and "financial problems" were considered by respondents to be the two most important reasons for selling farmland in the year ending February 1, 1982. The researchers noted that in most cases there was a combination of reasons for farmland purchase or sale.

Johnson and Hanson used information on farmland sales, compiled by the Federal Land Bank of Omaha, to gain perspective on size characteristics. They found that the majority of land transfers fell into the basic Rectangular Survey size increments. Sales tended to be of parcels rather than complete unit farms. The most common parcel size was 160 acres followed by the 80 acre unit.

The Minnesota Rural Real Estate Market in 1981

A study of the Minnesota rural real estate market in 1981 was recently completed by Matthew Smith and Philip Raup[8]. They used data collected by questionnaires which were mailed to real estate brokers, appraisers, loan agency officials and others knowledgeable of rural land values in their areas. Respondents estimated the current average value of various grades of farmland and reported on such features of farmland sales as financing methods and buyer, seller, and farmland characteristics. This study suggests that although the rate of farm transfers (number of transfers per 1,000 farms) in Minnesota was up in 1981 from 1980, voluntary sales declined. Forced sales, which included foreclosures and defaults of contract, increased significantly, however. Death and retirement were suggested as the main reasons (51 percent) for farmland sales. The decision to leave farming for another job was cited as the reason for 16 percent of the sales.

Sole tract operators were defined as operators who buy intact farms which they farm themselves. Agricultural investors were described as individuals who buy intact farms or parcels which they rent out or manage for farming purposes. The third type of buyer was described as the investor or farmer whose purchase enlarges his existing farm unit. Expansion buyers accounted for 72 percent of all tracts purchased in the sample;

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[7](cont'd)pp. 10 – 24.
[8]Matthew G. Smith and Philip M. Raup, "The Minnesota Rural Real Estate Market in 1981," *Minnesota Agricultural Economist*, 633 (March 1982): pp. 1–4.

sole-tract operators for 17 percent; and investors for 11 percent. The expansion buyers paid much higher prices for agricultural land than the operators or the investors in this study.

Local buyers tended to dominate the Minnesota rural land market in 1981. Seventy percent of buyers in the Minnesota market lived within ten miles of the tract they purchased. Only 4 percent of all purchasers lived more than 300 miles from their purchased tract. This seemed to suggest that foreign buyers do not exert a significant influence on the land market in Minnesota.

The Rural Real Estate Market in North Carolina

Leon E. Danielson published a report which discusses the market for farmland in North Carolina and presents the results of the 1980 North Carolina Rural Real Estate Market Survey[9]. This survey consisted of a four part survey which was mailed to brokers, realtors, appraisers, bankers, loan representatives, and others knowledgeable of farm sales. Individuals were chosen to be part of the sample if they had been involved in farm land sales during the sampling period. They were identified by agencies, societies and associations involved in real estate. In the first two parts of the survey the respondents were asked to give their judgement on the status of the land market in terms of the value of farmland and the extent of buyer/seller activity for land in farming and for land to be converted to non-farm use, as of April 1, 1980. These parts of the survey received 383 responses. The third and fourth parts of the survey requested information from the same individuals on actual sales of farmland for future farm and non-farm use between October 1, 1979 and March 31, 1980. The analysis of these two parts used 317 and 126 sales, respectively.

Throughout North Carolina, farmers and farmer-investors were indicated to be the primary buyers of farmland kept in farming. Full-time farmers comprised 28 percent of the buyers; farmer-investors, 28 percent; investors, 13 percent; hobby farmers, 4 percent; and all others, 27 percent.

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[9]Leon E. Danielson, *The Rural Real Estate Market in North Carolina* (Raleigh, North Carolina: North Carolina State University, Department of Economics and Business, December 1981), pp. 33-67.

Danielson found that the market value of high quality farmland in North Carolina was approximately twice that of poor quality land. The average value of the state's farmland for farm use was estimated to be $1,270 per acre on April 1, 1980. The author of this study concluded that non-farm demand had a marked influence on the value of rural land in North Carolina. Approximately 34 percent of the farmland sold in the state was for non-farm use. Further, 51 percent of the respondents felt that non-farm uses of land were the primary determinant of farmland values. The remaining 49 percent felt that agricultural uses were the primary influence. Rural development and recreation or vacation homes were cited most often as the non-farm uses having the greatest impact on value.

The estimated value of land for commercial or industrial uses was highest of all non-farm uses. Recreation, rural residence, and holding for future development followed in order of value. Some categories of non-farm use had high values per acre but relatively little farmland was being converted to those uses.

Although Danielson distinguished between land purchased for farm and non-farm uses, he noted that the average value per acre of both uses generally declined as distance from towns and cities increased. He suggested there is difficulty in estimating urban influence on land prices based on distance measures alone since the nearest town may not have the greatest impact on land value.

The average size of tract sold in the state in 1981 was 114 acres. Danielson's study suggests that value per acre declined for all sales as tract size increased. This effect might be caused primarily by a reduction in demand for tracts of larger size.

Throughout North Carolina the average distance between the buyer's residence and a tract purchased for farm use was 55 miles. The average distance between the tract and the owner's residence was 157 miles if the tract was purchased for a non-farm use. Twenty-one percent of farm tracts were purchased by persons living within 2 miles of the tract and 56 percent of purchasers lived within 9 miles. Of the non-farm tracts, only six percent of the purchasers lived within two miles of the tract; 36 percent lived within nine miles. Danielson notes, however, that the results indicated the absence of any relationship between tract price per acre and distance to the purchaser's residence.

"Death of the owner" and "financial problems" were listed as the main reasons for the sale of a tract. Nearly 30 percent of the farm and 17 percent of the non-farm tracts were sold because of death of the owner. Nearly 11 percent and 19 percent of the sales of farm use and non-farm use land, respectively, were because of financial problems.

Most tracts in the study were purchased by assuming a mortgage. Sixty-one percent of farming tracts and 45 percent of non-farming tracts were purchased by mortgage. Four percent of farming tracts and 13 percent of non-farming tracts were purchased with a land contract and 25 percent of farming tracts and 30 percent of non-farming tracts were purchased with cash.

Nearly 85 percent of all buyers of farm tracts were individuals; 6 percent were partnerships; 8 percent were corporations; 1 percent were foreign citizens. Nonfarm tract buyers resided primarily in centers having a population larger than 10,000. Seventy-five percent of these tract purchasers were individuals; 8 percent were partnerships; and 17 percent were corporations.

C. Studies Concerning Rural Real Estate Markets in Canada

Farm Credit Corporation Farm Survey

The Farm Credit Corporation (FCC) initiated the Farm Survey in 1981 to obtain financial and investment information on farmers[10]. The survey sought information on issues relating to financing for farm businesses throughout the various provinces and for Canada as a whole. Although this is a survey of farms in general and not of land transfers, this study does provide useful information on the characteristics of farms and farmers in Canada in 1980.

The target population of the Farm Survey consisted of active farms, having total sales of over $1,200, on Statistics Canada's Register of Farms. Farms with Farm Credit Corporation (FCC) loans, but not on the Farm Register, were also included. For each province, farmers who had received an FCC loan were matched to the list of active farms on the Farm Register. Three groups were formed within each province: those farmers on both lists, those on the Farm Register, and those on the FCC list. The sample size allotted

[10]Farm Credit Corporation Canada, *Farm Survey* (Farm Credit Corporation Research Division, 1981), pp. 20-88.

to each province was a function of the FCC staff size in the province. Provincial sample sizes were allocated to each of the three groups in proportion to the square root of their population sizes. This allocation increased the sample selected from smaller populations. The total survey sample size was 5,170 farms. The Alberta sample size was 1,000. The sample was selected using systematic sampling.

Almost 84 percent of the respondents from Alberta obtained their short term financing from banks and credit unions; 71 percent received their intermediate financing from the same group of institutions; but only 30.6 percent received their long term financing from this group. Long term financing in Alberta came primarily (46.6 percent) from the Federal Government; 13.2 percent came from the Provincial Government; and 5.8 percent came from individuals related to the borrower.

The Farm Survey grouped farmers into three economic classes. The lowest of these (those with less than $30,000 in farm sales) accounted for 41.6 percent of Alberta farms; the middle economic class (those with $30,000 to $70,000 in farm sales) accounted for 27.9 percent of Alberta farms; and the highest economic class (those with farm sales greater than $70,000) accounted for 30.5 percent. The average number of years the respondents had been self-employed as farm operators in these 3 classes was 24.

The Farm Survey found that the average real estate value in Alberta in 1980 was $710 and that, in that year, farmers transferred 514,534 acres of land. These transferred acres represented 1.7 percent of the total owned farm real estate in the Province in 1980.

An Investigation into Rural Property Ownership

In 1973 a survey of the owners of rural property in Alberta was conducted by Alberta Agriculture for the Alberta Land Use Forum[11]. This study can be used as an initial body of data on ownership of rural property in Alberta. The study is useful in that it provides broad parameters of information on ownership.

A stratified random sampling procedure was used to chose the sample. Municipalities in the province were first grouped by Soil Zones on the assumption that soil characteristics have a large influence on land use. A random sample of one-third of the

[11]G.B.H. Parlby, *An Investigation into Rural Property Ownership in Alberta* (Edmonton, Alberta: Alberta Land Use Forum, 1974), Technical Report 6A, pp. 1-42.

municipalities within each Soil Zone was drawn. The final sample contained twenty municipalities. The number of townships within each municipality was determined and a 25 percent (or 218) random sample of these townships was drawn. Finally, a list of owners for these sampled townships was drawn up from the Tax Roll and Master File records of the municipal offices which contained these townships. Tax Roll records, which file information by parcel, and Master File records, which file information by owner, provided the bulk of the information on the landowners for the study. The remaining information was collected through a questionnaire which was distributed to the landowners in the sample.

Almost 8,000 registered landowners, representing approximately 40.3 percent of the total farm units and 25.2 percent of the total farm land in Alberta, were sampled in the study.

The results of the survey showed that 79 percent of the respondents were classified as farm residents; 11 percent lived within the community; 5.8 percent lived within the Province; 1.8 percent lived within Canada; and 1.2 percent were not living in Canada. Individuals owned about 87.5 percent of the land; partnerships and corporations controlled the remaining 12.5 percent. Ninety percent of the respondents owned between 60 and 1,600 acres. In comparison, 81.3 percent of the respondents owned a section of land or less. Only 1.3 percent of the land within the whole study area was owned by people with foreign addresses.

Non-individual farm residents held land in a number of ways. Family corporations were the most common (45 percent of non-individual farm residents); non-family corporations (24.8 percent) and family partnerships (15.8 percent) ranked second and third respectively. It is noted in the study, however, that the form of land ownership can differ from that of the organization of the farm business.

D. Conclusions

It is apparent from reviewing the preceding studies that agricultural real estate markets can vary widely from area to area. Some of the studies dealt with transfers; others with landownership. All of them used survey techniques but these techniques varied considerably. Two of the studies surveyed land buyers; two surveyed land owners;

one surveyed defined farmers; and three surveyed individuals involved in real estate markets.

The most common reasons given for selling tracts in the studies were "estate settlement" and "financial problems". "Establishing a farm", "farm expansion", and "investment" tended to be ranked as the main reasons for purchasing land. Residence of buyers or owners varied from study to study but residence within the study area tended to be most common. Most of the non-local residents purchased farm property for investment purposes. Farming was given as the most common occupation of owners. Full-time farmers and farmer-investors appeared to be the major purchasers of agricultural land. The highest percentage of all buyers were individuals, followed by family partnerships and family corporations. Credit financing was required by most purchasers. Many of the studies mentioned the importance of vendor financing to land purchasers but cash and mortgage sales were also evident.

III. HYPOTHESES

A. Introduction

The purpose of this chapter is to outline the hypotheses which will direct the research of this study and which have been developed in an attempt to address the issues in the study. This chapter provides some information from previous studies and, where applicable, economic theory relating to the formation of the hypotheses of this study.

B. Alberta Agricultural Land Transfers

Transfers or changes of land titles may occur for many reasons. Perhaps one of the primary causes of transfers is the sale of parcels of property. In this situation the transfer is from the vendor to the purchaser. Property which forms part of an estate may be transferred into the name of the executor of the estate until that estate is settled, at which time the property will be transferred a second time. Title changes or transfers also occur when names are added to, or deleted from titles. A different kind of transfer occurs when purchases of land are made on the basis of a sales agreement. These agreements are often in the form of seller-financed land contracts. In this case the seller agrees to transfer possession and title of a property after all, or an agreed part of, the price has been paid. The buyer promises to pay the purchase price of the parcel along with interest on the unpaid balance in installments over a specified period of time. In this way a parcel may actually be purchased in one year but the title to the parcel will not be transferred until some later date. Another type of sales agreement sometimes is employed when some other credit institution besides the seller is providing the financing for a purchase. In this case the title to the property is actually transferred twice; once from the vendor to the creditor when the original sale takes place and once from the creditor to the purchaser when some prearranged state of repayment is reached.

Since no studies dealing with the specific issue of types of agricultural land transfers have been completed for the Alberta farmland market, it is difficult to determine what proportion of the transfers which took place in 1981 in Alberta occurred for the various reasons described above. Of the over three million acres of real estate

transferred in Alberta in 1981, about 90 percent was categorized as agricultural land[12]. Land classified as agricultural land, however, may contain land in an undeveloped state. The Alberta Agriculture data on agricultural land transferred in 1981 does not include estate transfers to executors nor transfers of provincial crown land. These figures also do not include transfers having an assurance fund value of less than $5 or of more than $1,500[13]. It may be hypothesized that all of the types of transfers discussed above (estate settlements, sales, name changes, et ceteral occurred and that some may have occurred more often than others.

C. The Nature Of Buyers

There is very little information available to the public on who is buying farmland in Alberta. Unfortunately, this can lead to misconceptions or misunderstandings of the real agricultural land market. A major purpose of this study is to disclose who the purchasers of agricultural land in Alberta were in 1981. Much of the popular literature on agricultural land markets seems to have centred on foreigners, farmers, and speculators as buyers. In this province some concern has also been expressed by the general public over the role of Hutterite colonies in the agricultural land market.

Hutterite Colonies

The scope of this study does not allow for a sample large enough to adequately analyze or accurately conclude what the role of Hutterite colonies was in Alberta's agricultural land market in 1981. The studies noted below, which were completed in the 1970s, on Hutterite colonies suggest that their impact on land markets in general is minimal.

Hutterites are agriculturalists. The communal system which they live under dictates that the communal economy must be successful enough to allow the commune to accumulate capital to finance the establishment of a new colony when the population of the existing one is too large for the land to support and there is insufficient work for all to do.

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[12]Melville D. Miller, *1981 Agricultural Real Estate Values in Alberta*, (Edmonton, Alberta: Alberta Agriculture, August 1982), p. 33.
[13] Ibid. p. 4.

Although data on Hutterite colonies are not specifically collected by Statistics Canada, some information was collected on their status in Alberta in 1971 and 1974. In 1971, 82 colonies with a combined population of 6,732 (or about 1.65 percent of Alberta's farm population) farmed 721,559 acres of land (or about 1.45 percent of the land farmed in Alberta). In 1974, 88 colonies farmed 807,406 acres of land or about 1.63 percent of the total land farmed in Alberta.

A great deal of interest in this particular form of land ownership has been shown by individuals and citizen's groups in the past. This was especially noted by the *Report on Communal Property 1972* which was completed by an Alberta Select Committee of the Assembly. Most of the Alberta Government reports on the topic, however, state that the communal holdings in the province are such a small percentage of the total land farmed that the significance of Hutterite colonies in determining patterns of ownership is difficult to determine. In other words, the problems of communal land holdings, if any exist, cannot easily be isolated from general problems of land ownership and use. One study concludes that communal farming will have no detrimental effect on land use and no significant effect on patterns of land tenure in Alberta at least until the year 2000[14].

Until 1973, Hutterite expansion was restricted by the Communal Property Act. This Act was repealed on the recommendation of the Alberta Select Committee of the Assembly (Communal Property) on the grounds that restriction of the expansion of Hutterite colonies could not be justified from the point of view that the colonies were economically or socially disadvantageous to the province. The committee noted that these restrictions were aimed at a particular class of land holders and, therefore, violated the spirit of the then proposed Alberta Bill of Rights[15]. The *Report on Communal Property, 1972* found that many of the complaints lodged against Hutterites were either unjustified or based upon only partially accurate information. One complaint concerned the "crowding out" of other farmers by Hutterite colonies. The Committee argued that even with the restrictions of the Communal Property Act, Hutterites found land to buy. It was noted that this was probably because of the increasing number of individuals finding rural life less appealing than urban life and the difficulty in attaining success experienced by

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[14]K. Hoeppner and J. Gill, *Communal Property in Alberta*, Report No. 6C (Edmonton, Alberta: Alberta Land Use Forum, 1971): pp.10 and 12.
[15]Ibid. p.17.

small farmers. The committee also suggested that arguments regarding inflated or deflated land prices in proximity to Hutterite colonies equally applied to land in proximity to all large farms, of which the numbers in Alberta were well in excess of the number of Hutterite colonies[16]. The Committee found that public misunderstanding of Hutterites and Hutterite misunderstanding of general society were the cause of many complaints. On the recommendation of the Committee, the government established a Hutterite Liason Office to serve an information and public relations function.

While enough information on Hutterite colonies will not be generated by this study to effectively draw any conclusions, it is anticipated that some of the respondents will express concern over what they perceive to be a significant influence by Hutterite colonies on land prices in this province.

Non-Resident Ownership

Alberta does not monitor purchases of land by Canadians not resident in the province of Alberta. The provincial government's attitude is that Canadians have a right to own land and other assets throughout Canada, regardless of their place of residence.

On the other hand, foreign ownership of land in Alberta is heavily regulated by the Foreign Ownership of Land Regulations which are administered by the Foreign Ownership of Land Administration. The Regulations have authority under The Citizen Act (Canada) and The Agricultural and Recreational Land Ownership Act. Various statistics are collected by the regulating body on foreign ownership. Foreigners are defined as non-Canadians, non-permanent residents, or foreign controlled corporations[17]. The Alberta Government limited acquisitions of land by foreigners to 20 acres per buyer on April 16, 1977.

Sales to foreigners comprised only 0.2 percent of total sales of rural land in 1980 in Alberta. Of the 6,392 acres acquired by foreigners in 1980, almost 43 percent was acquired by foreign residents in the settlement of estates; 19 percent was for industrial and resource development; 18 percent was by order-in-council[18]; and 16 percent was

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[16]Alberta Select Committee of the Assembly (Communal Property), *Report on Communal Property, 1971* (Edmonton, Alberta: n.p., 1972), p. 33.
[17] Alberta Energy and Natural Resources, *Annual Report March 31st, 1980* (Edmonton, Alberta: Alberta Department of Energy and Natural Resources, October 1980), p. 26.
[18]Orders-in-council are passed by the Executive Committee of the Foreign Ownership of Land Administration when parcels of land are determined to be exempt from the Land Regulations. In 1980, 1,150 acres of exempted land were acquired by foreigners. Most of the orders-in-council were for residential, industrial and resource development.

for agreements started before April 16, 1977. Almost 80 percent of the area acquired by foreigners in the province in 1980, including estate settlements, was of Soil Class 4 or better. Almost 75 percent was of Soil Class 2, 3, or 4. Most of the foreigners acquiring land in Alberta were from the United States (83.6 percent); England was a distant second place of residence (8 percent). Statistics are available on area acquired by foreigners by municipality and these are illustrated in Figure III.1. Most of the acquisitions appear to be in farm oriented areas and cluster around the Peace River, Edmonton and Lethbridge districts. The average price paid for this land was $5,558 per acre[19]. While this is dramatically higher than the average price paid per acre for agricultural real estate in Alberta that year ($386) and in 1981 ($444), the information noted above suggests that this reflects the relatively higher prices which generally are paid for land for industrial or resource development[20].

In general, it is difficult to document the impact that foreign or non-local purchasers have on land prices. Foreigners may pay premium prices for farmland and may have an effect on the price of land in the local market. The lack of accurate sales-price data, information on non-armlength transfers, and differing qualities of land make comparison difficult. Foreigners may be unfamiliar with local markets and they may pay premium prices for this reason. This may change as foreigners interested in purchasing land in Alberta obtain more information on this market. Finally, foreigners may pay more because they want highly productive land[21].

A study completed in 1979 gives some information on the influence of non-residents on the price of farmland in Saskatchewan and Manitoba. In Manitoba a non-resident was defined as a farmland owner not residing in the rural community while in Saskatchewan a non-resident was defined as a farmland owner not residing in Saskatchewan[22]. This study concluded that private non-resident ownership in Saskatchewan and Manitoba was responsible for a 6 percent increase in the mean municipal land price in the two provinces in 1976. The author concludes that in areas of relatively high non-resident ownership, non-residents pay more on average for similar

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[19]Alberta Energy and Natural Resources, pp. 72-75.
[20] Melville D. Miller, *1981 Agriculture Real Estate Values in Alberta*, p. 28.
[21]Robert G. Healy and James L. Short, *The Market for Rural Land* (Washington, D.C.: The Conservation Foundation, 1981), p. 63.
[22] Janis Olof Magnusson, "The Influence of Non-Resident Investment on Farm Land Prices in Manitoba and Saskatchewan," (MSc. thesis, University of Manitoba, 1979), pp. 121-123.

FIGURE III.1:
Area in Acres Acquired By Foreigners By Municipality, 1979/80

SOURCE: Alberta Energy and Natural Resources Annual Report, March 31st, 1980.

land parcels than do residents[23].

The above information suggests that foreign ownership is not a problem in Alberta. The study will try to isolate the effects of foreign ownership on the agricultural land market in Alberta in 1981 but it is anticipated that enough data will not be accumulated in order to accomplish this. It is suggested, however, that participants in the market will view foreign ownership as detrimental to the market.

Speculators

It seems difficult to clearly distinguish between the speculator and the investor but some researchers have made this distinction. Speculators invest monies at a risk with the hope of gain. Land speculators are traditionally viewed as interested in real estate as a commodity which is bought and sold for profit, not as a means of generating income from its operation. Land speculation might be expected to flourish during periods of rising prices such as those which were experienced in Alberta from 1970 until late 1981. In this situation, the speculator's interest might be thought to lie in "quick sales" and in profitable and rapid turnover of capital investments[24].

On the other hand, a land investor might be viewed as expecting benefits during the holding period through both the productive use of the land and profits from the eventual sale of the property. Investors are generally viewed as having longer time horizons than speculators and they are viewed as relying less on a change in the use of land to provide profits.[25]

Agricultural land might be purchased at least in part as a hedge against inflation and this may be the way both speculators and investors view their purchases. The value of land as an inflation hedge arises because rural land has generally tended to increase in price at a higher rate than has the rate of inflation. Land may be purchased as insurance against further losses of the purchasing power of the dollar.

Speculation may contribute to a more orderly transition of land from one use to another. This may smooth out market price fluctuations by keeping a stock of land readily

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[23]Ibid. p. 1.
[24]Raleigh Barlowe, *Land Resource Economics, The Economics of Real Estate* 3rd ed. (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1979), p. 201.
[25]Healy and Short, p. 65.

available for sale. Speculation may also inflate land prices because land held for speculation reduces the land available for immediate use. Observing rising land prices may cause those whose motives are primarily non-speculative to buy land earlier than they normally would, to avoid paying even higher prices, thus temporarily adding to demand and the price of land[26].

A problem exists in the labelling of individuals as speculators or investors in that individuals may change their perspective on the land market. For example, people who have concentrated on the productive qualities of their land may at some point begin to pay more attention to price appreciation. Farmers might be labelled as speculators because they may wish to sell their land to foreigners and non-residents from outside their local rural markets, perhaps at higher prices than might otherwise be paid. Individuals who have productively used land for many years may be called speculators, because economic conditions or their views of the future have changed. Indeed, a mix of motives may well be held by many of those buying or selling farmland and these motives may change over time.

In the long run, the price of land will, other things being equal, increase at a rate greater than the inflation rate if prices for the products produced by the land continue to rise or if the productivity of the land continues to increase. When there is rapid inflation, behavior may change. The role of land as a factor of production may become secondary if there are expectations of ever increasing land prices. Land is generally perceived as a good inflation hedge. Inflationary expectations and the availability of mortgages at rates of interest lower than the general price inflation rates, help explain a rise in farmland prices that was more rapid than the rise in cash rents and also help explain the continued increase in land prices despite falls in crop prices[27].

D. Gale Johnson notes that a potential effect of inflation is the consideration of land as one of the few good inflation hedges.

> To the degree that farmland has been an inflation hedge and part of its current price so reflects, the acquisition of land becomes more difficult for those who must acquire it by purchase. But except for the difficulty of acquisition ... the fact that farmland is an inflation hedge is a disadvantage only when it should cease to be a hedge. At that time, the owners of land would suffer a capital

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[26] Ibid. p.67.
[27] Robert G. Healy and James L. Short, *The Market for Rural Land: Trends, Issues, Policies*. (Washington, D.C.: The Conservation Foundation, 1981): p. 43.

loss[28].

While, as noted, it is generally difficult to identify a speculator it may be possible to isolate certain types of respondents who may be more likely to have speculative motives. In this regard it is hypothesized that urban dwellers, specifically city dwellers, may have a tendency for more interest in potential capital gains and investment returns from land. It is further hypothesized that agricultural land purchasers who do not have an agricultural occupation may be more likely to have speculative motives than do agricultural-occupation purchasers. These individuals may have a tendency to have a greater interest in capital gains and land as an investment.

Farmers

It has been argued that many farms and ranches operate a business that is closely linked with the life cycle of the farmer and the firm itself[29]. A farmer's objectives may change throughout his life cycle. The stages in a life cycle may vary substantially in length, style, and behaviour amoung individuals. The following descriptions might characterize these stages.

It is likely to be the main objective of many beginning farmers to establish themselves in agriculture with a workable organization and control of enough land, labor and capital to enable future growth. Wealth and liquidity are likely to be low; risk to be high. The strategies beginning farmers choose as they enter agriculture may significantly influence their cash flow, profits, and growth potential for many years.

Farmers in the "growth stage" of a firm's life cycle may try to make more use of their management capacity and to gain economic security. Their preference for equity is likely to be high. They may seek to improve managerial skills, to reduce risk, and improve the functioning of their business. These farmers may be the "farm enlargement buyers" in an agricultural land market.

Farm businesses in a subsequent "consolidation stage" of their life cycle might be viewed as involved in the consolidation of their economic gains in preparation for transfer to new management. These businesses may be in a stronger financial position and the

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[28] D. Gale Johnson, "Inflation, Agricultural Output and Productivity." *American Journal of Agricultural Economics* (December 1980): p. 922.
[29] Peter J. Barry, John A. Hopkins, and C.B. Baker, *Financial Management in Agriculture*, 2nd ed. (Danville, Illinois: The Interstate Printers & Publishers, Inc., 1979), pp. 130-131.

attention of their owners may turn to debt-free ownership and stability and maintenance of income. Growth, however, may continue in this stage.

Farmers who are transfering their business to new management may have accumulated experience and capital but their energy and planning horizons may be short. Quick paybacks on investments; stable, liquid sources of retirement income; the preservation of management continuity and production efficiency; and the minimization of cost of transfer may become the primary concerns of the farmer in this stage. Although maximizing profits may be an important force behind farm decisions, it is not the only force. It appears that most farmers have many goals they wish to achieve. In addition to achieving a good income, farmers may identify independence, security, a feeling of accomplishment, and family tradition as motivational benefits received from farming. These goals may change over time and they may lead many individuals into a farming occupation and perhaps eventually to a farmland purchase.

Overall, the stages in the "life cycle" of farmers may drastically affect the way they view a prospective agricultural land purchase as well as the way they consider related features such as off-farm jobs and credit terms and availability, types of land ownership, and farm business structure.

Off-Farm Jobs

According to a study prepared by Ray Bollman, between 1941 and 1976, the proportion of census-farm operators in Canada reporting "some days of off-farm work" remained at about one-third. The age of the operator has been thought to be an important variable influencing the participation of operators in off-farm work. Bollman's study hypothesized that participation in off-farm work would be larger for younger operators because beginning farmers would obtain off-farm jobs to finance their entry into farming. It was also hypothesized that younger farmers would have a better education and more job skills to qualify them for off-farm jobs. In each census from 1951 to 1971, the younger the operator, the greater the proportion reporting some off-farm work. A time-series analysis of age groups in his study, however, suggests that at least for younger operators, participation in off-farm work increases as age increases.[30]

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[30]Ray D. Bollman, *Off Farm Work by Farmers* (Ottawa, Ontario: Statistics Canada, March

In the 1981 census, over 41 percent of the total number of farms in Alberta reported some off-farm work.

In a study done in Michigan in 1964 on the use of credit and the financial conditions of Michigan farmers, it was found that off-farm work was more important as a source of capital after starting farming than at the time of start. In fact, only 13 percent of the respondents in that study had any off-farm income, either from themselves or their spouses, at the time they were starting farming, while 46 percent obtained income from this source at some point after becoming established. The study further notes that about twice as many farmers received income from off-farm work by the operator as by their spouse. Off-farm income, then, can be used to obtain, or add capital to the business and it appears to be important to farmers in all stages of life although the degree of importance varies. Farmers in the "establishment stage", for example, stated that nonfarm jobs were the second most important means of obtaining funds to farm. Thirty-eight percent of them used this means[31].

Part-time farming may help beginning farmers get a start by decreasing their dependence on farm income and therefore allowing them to start farming. It may provide a steady income which might allow a farmer to build up farm capital and the volume of farm business. It may lessen a farmer's dependence on credit. Full-time farmers may turn to part-time farming to supplement their income and still others may be part-time farmers throughout their farming careers. Although the interpretation of these features is not very clear it appears that although part-time farming may help some beginning farmers to get established, it is probably not a substitute for "family assistance"[32] and it may not give beginning farmers any special advantage in competing for land[33].

On the basis of the preceding studies, it is hypothesized that younger or beginning farmers may be more likely to have had an off-farm job. It is also

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[30](cont'd)1979), p.76.
[31]J.R. Brake and M.E. Wirth, *The Michigan Farm Credit Panel: A History of Capital Accumulation*, Michigan Agr. Exp. Sta. Res. Rep. 25, 1964, pp. 4-6.
[32]Family assistance may be provided in many ways, such as gifts of land, concessional credit terms, or purchase price for land that is lower than the market price.
[33]D. Kanal, *Opportunities for Beginning Farmers, Why are they Limited?* North Central Regional Pub. 102, Nebraska Agr. Exp. Sta. Bul. 452, 1960. pp. 16-17.

hypothesized that a greater percentage of farmers may have had an off-farm job after their purchase than had one before their purchase. It is further hypothesized that such factors as age, education, residence, number of acres of owned and rented land, and types of financing used may differentiate those with from those without an off-farm job.

Sources of Credit

The rapidly rising prices of agricultural land in Alberta over the 1970s have increased the capital required to purchase land. These increasing capital requirements may force purchasers to turn to lending institutions for more assistance. In 1980, about 90 percent of farm and ranch transfers in the United States involved some sort of financing. Downpayments on the purchase of land were only 22 percent of the total purchase price. Financing probably has become a major concern of farmland buyers.

Cash flows associated with the purchase and ownership of land occur over an extended period of time. Returns from production occur over many years. Capital gains may be realized when the land is sold. Funds borrowed to finance the purchase require interest and principal payments which may be spread over several years. Although the price of land is generally determined at the time of purchase, that price should reflect the value of anticipated cash flows which will occur over time.

Cash flows associated with farmland purchases involve both cash flows associated with the production and sale of agricultural products and cash flows associated with financing the purchase. Finance-related cash flows include downpayments, principal and interest payments, and service charges.

With most business investments, the net cash returns from the cash inflows and outflows associated with the production of agricultural products pay for the flows associated with financing the purchase. But rising land values may involve a problem of servicing the loans on those rising land values.

> In general, the *current annual cash return* to the land investment has not been high enough to service the principal and interest payments on the loan.[34]

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[34] J.C. Gilson, "Going! Going! Last Call! Sold! (What is the price of farmland?)", Journal of

Thus those with existing equity and those who may benefit from any economies of scale associated with owning more farmland may be best able to make the principal and interest payments on the money borrowed to buy the extra farmland. Beginning farmers with little existing equity or no other sources of income may be unable to subsidize a purchase.

Farmland buyers have three basic financing alternatives in making a land purchase. A purchase may be made by utilizing accumulated personal resources. It is possible to make a cash downpayment and borrow the remainder required for a purchase from an institutional lender or from an individual. Loans may also be obtained from other investors who may then have an equity interest in the land being purchased.

The terms of financing which are likely to have a significant impact on how much is paid for farmland and how it is paid include interest rates, length of loans, and size of downpayments. The interest rate paid on borrowed funds is likely to be an important determinant of the price that a purchaser can pay for farmland. Invoking financial theory, in general the higher the interest rate, other factors constant, the lower is the net present value of an acre of land. The net present value of land represents that price which could be paid for land to achieve a desired rate of return, given expectations about income, capital gains, tax rates and terms of financing. Net present value involves discounting expected net income flow from the land over a number of years, and expected capital gains when the land is sold, to express these in today's dollars. A lower net present value results from a higher interest rate because the outflows associated with the purchase of land are larger when more interest is being paid. However, the extent of the impact on the net present value of land depends on the discount rate used in the calculations as well as the marginal income tax rate of the borrower[35].

The amount of downpayment required on a land purchase may have an important bearing on the feasibility of the purchase, at least in part because it affects the purchaser's cash flow. A purchaser's proposed size of downpayment and

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[34](cont'd)the American Society of Farm Managers and Rural Appraisers, 46 (October 1982): p. 63.

[35]David A. Lins and Robert G. Aukes, "How Financing Alternatives Influence Farmland Values," *Agri Finance* (January 1979), p. 26.

expected cash flow can also influence the price paid for land depending on the relationship between the discount rate used and the after-tax interest rate on the loan. If the discount rate is less than the after-tax interest rate, a larger downpayment would increase the price that can be paid for land. If the discount rate is higher than the after-tax interest rate, a larger downpayment decreases the price that can be paid for land[36].

Again, invoking financial theory, the length of a loan will affect the net present value of land and thereby can be expected to affect the price that can be paid for land by purchasers to receive a given rate of return. If the after-tax interest rate on a loan is higher than the chosen discount rate, a loan with a short maturity which meets cash flow requirements should be sought. Likewise, if the after-tax interest rate on a loan is less than the chosen discount rate, a loan with the longest maturity possible should be sought[37].

Just after a purchase of farm land is made, interest payments on some loans may be greater than earnings and a negative cash flow will be produced. At some point, positive cash flow will exist. This occurrence might put a new entrant to farming at a disadvantage relative to established farmers who can use the cash flow surplus of existing holdings to offset the early negative cash flow of a new purchase. Sometimes established farmers may also have an advantage in the purchase of land if the interest rates on the loans for their existing holdings are lower than the current rate.

High inflation rates may reduce the maximum size of farm that an entrant to farming can buy because less land can be bought with a given equity base. The initial purchase of agricultural land may still be feasible for limited-resource beginning farmers who have access to rental land and off-farm jobs. A purchase for these farmers, however, may still not be as feasible as it might be for more established farmers.

Given the extensive use of credit financing for the purchase of real estate and the bearing it has on the purchaser, it is important to recognize the various sources of such financing and the terms and conditions under which financing is

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[36]Ibid. p. 26.
[37]Ibid. p. 25.

made available. There were four major sources of debt financing for the purchase of agricultural real estate in Alberta in 1981. Each source had its own programs, interest rates, and eligibility criteria. These sources were:

1. the provincial government: Alberta Agricultural Development Corporation (AADC),
2. the federal government: Farm Credit Corporation (FCC),
3. commercial banks, credit unions and treasury branches, and
4. individuals and others.

In 1981, the Alberta Agricultural Development Corporation (AADC) offered three types of loans for purchasing farmland. The first two types of loans were characterized as direct farm loans designed for the purpose of assisting primary producers to develop and maintain viable farms. Loan amounts were dependent on the business structure of the farm and they could be amortized over any period up to thirty years if they were used to purchase farm land.

The first of these farm loans were termed A loans. Interest on A loans was fixed for a five year term. The interest rate on the first term of the loan was at AADC's periodically reviewed preferred lending rate, less 3 percent. On renewal, the offered interest rate would reflect AADC's lending rate, then in effect, subject to certain limitations. The A loan was available to

> developing farmers who derived the majority of their income from farming and who were unable to obtain funds at reasonable terms from other sources [38].

The program was only available, however, to borrowers with no more than $450,000 in total assets and $225,000 in net worth[39].

Part B Loans, the second type of loan offered by AADC, were amortized over five years and had a fixed interest rate for five years. The interest rate in this case, however, was at AADC's preferred lending rate. On renewal, the interest rate reflected AADC's current lending rate, then in force, subject again to certain restrictions. The B loan was available to

> developing farmers who were unable to obtain funds at reasonable terms

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[38]Alberta Agriculture, *Sources of Farm Business Credit in Alberta* (Edmonton, Alberta: Print Media Branch, Alberta Agriculture, October 1982), p. 2.
[39]Ibid. p. 2.

from other sources and who did not qualify for an A loan[40].

AADC's third type of loan, the Beginning Farmer Program, was designed to assist young, potential farmers in developing viable farming units. The loan maximum was $200,000. Loans for buying land could be amortized for up to 30 years. Fixed preferred interest rates applied for periods of five years. An earned incentive calculated at 6% of the original principal balance had to be paid annually for a term of five years, if the applicant complied with the terms and conditions of the loan. Applicants could opt to phase into the Beginning Farmer Program in two stages. Then the same conditions applied but new ones were added which dealt with amounts and dates of application. Primary producers with at least one year of practical experience, education in an agricultural field and shown management ability could apply for loans under the Beginning Farmer Program but their acceptance was subject to total asset and net worth figures. Applicants were required to have a 10 percent vested interest in their proposed operations and they had to meet the other conditions of the loan[41].

Farm Credit Corporation offered one type of loan which could be used to purchase farm land. A qualifying applicant could obtain a loan of up to $200,000 for a single farm business. If there were two or more qualifying applicants the maximum was $400,000. The term of the loan was dependent on loan purpose, repayment ability and farm operation. Interest rates were revised semi-annually and once the interest rate on a loan was set it was fixed for the life of the loan. Loans were repayable any time and they were generally secured by mortgage. FCC loans were available to applicants occupied in farming or about to become full-time farmers at the time of the loan. They were also available to people under 35 years of age who intended to retain off-farm employment in order to develop their farm business. These applicants' principal occupation had to become farming within five years[42].

The Federal Business Development Bank provided loans to

> individuals whose credit requirements were not readily available from other lenders at reasonable terms and conditions[43].

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[40]Ibid. p. 3.
[41]Ibid. p. 4.
[42]Ibid. p. 15.
[43]Ibid. p. 18.

Monthly interest and principal payments applied. Interest rates could be fixed for five years at a rate determined at the time of disbursement of the funds. Interest rates could also float at the cost of borrowing and administration plus 1.25 percent[44].

Chartered banks, treasury branches and credit unions also provided long term financing for the purchase of land. Each of these sources of credit had their own guidelines to follow in granting credit. Interest rates were usually dependent on the banks' prime rate and were generally negotiable. Loans were available to farming, ranching and primary agricultural producers who demonstrated good management and repayment ability. Adequate security had to be available and sufficient repayment capacity had to be demonstrated by applicants. Most banks required that other conditions be met by applicants as well[45].

Sometimes independent individuals will provide financing for an agricultural land purchase. Seller-financed installment land contracts, where title to property is not transferred until a specified amount of the principal has been paid to the seller, may be used to assist an agricultural land purchaser. Sellers could use the payments as an annuity if they were retiring. Sellers could also spread capital gains over the length of the payment schedule. In return, sellers gave up some liquidity. The buyer, in a land contract, may face lower downpayment requirements and interest rates relative to conventional mortgages. Since sellers retain the title for a specified time buyers may forfeit their equity if they were to default on payments[46].

Family and relatives can be of great help to young farmers. Assistance can be in the form of gifts of land or property, credit in excess of conventional arrangement, or the amount by which a purchase price extended by a relative is below the market price of the real estate. The significant aspect of family assistance is that often it is extended without the usual downpayment and on a flexible basis which allows ample time for repayment and postponement of payments if necessary.

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[44]Ibid. p. 18.
[45]Ibid. p. 21.
[46] Bruce B. Johnson and Ronald J. Hanson, *Nebraska Farm Real Estate Market Developments in 1981-1982*, (Lincoln, Nebraska: University of Nebraska-Lincoln, July 1982), pp. 14-18.

Availability of family-owned land may be a chief factor in enabling many beginning farmers to start farming. Families may make it possible for young related farmers to compete in renting and purchasing land from non-relatives. Older relatives can help young farmers by extending credit, co-signing loans and acting as go-betweens with landlords. In these ways, family assistance may improve the competitive position of beginning farmers[47].

In other cases, capital can be raised from investors other than relatives or friends. There can be an issuance of stock by a corporation by which investors buy shares of stock in the corporation and the corporation in turn invests in farmland.

Equity capital can also be raised through the formation of limited partnerships. In this case, a general partner issues shares of "partnership interest" to outside investors who are limited partners. The partnership then uses the capital raised from selling shares to purchase farmland.

The different sources of financing are expected to be utilized by different groups of all types of agricultural land purchasers. In particular, younger farmers are expected to obtain a large portion of their financing from AADC. Downpayment sizes are expected to vary by age and occupation. FBDB, seller and family monetary financing are hypothesized to be used less often than the other major financing sources.

Farm Business Structure and Land Ownership

Types of land ownership generally fall under the same headings as types of business arrangements though the two need not necessarily coincide. For example, a farm may be operated as a partnership but the land farmed by the partnership may be owned by one of the partners. The type of ownership often becomes important when land is transferred to another party. The importance stems from tax considerations and consequences in terms of rollovers[48], tax deferrals,[49]

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[47] D. Kanal, p.14.

[48] A rollover arises when eligible property is transferred between two parties and the recognition of a capital gain, in the case of farmland, is deferred for income tax purposes. Since a rollover involves a tax deferral, when the land is eventually disposed of, any capital gains will be subject to tax.

[49] Farmland can be transferred from an individual to his or her spouse, to a partnership, and to a corporation and be classified as a rollover. A roll-over of farmland to a child in the form of a gift, sale or bequest is possible if the property was used in the business of farming right before the transfer; if the land was transferred to a child, grandchild, or

and capital gains[50].

There have, traditionally, been three types of business arrangements in the farming sector of the economy of Alberta. Sole ownerships or proprietorships have the simplest arrangement. In this case, the sole owner has absolute control over the business and therefore carries full responsibility and liability for it. This involves simpler accounting and tax filing procedures. Certain tax benefits and liabilities apply only to this type of business structure. The sole proprietor has only the will as an estate planning tool. Sometimes there is little security and incentive in sole ownerships for children of the owner who wish to farm[51].

Partnerships allow the sharing of responsibilities between partners but partners are also liable for each other's actions. Certain tax benefits and liabilities apply to partnerships as well. There is more flexibility in this business structure, especially in regards to estate planning. There are various types of modified partnerships including husband and wife partnerships, where the couple splits the income; and brothers in partnership, where each brother owns his own real estate[52]. In ordinary partnerships all partners share equally in profits and losses. In limited partnerships some partners have a limited liability. Limited partners can contribute only money or property to the partnership and they play a limited role in the business. There must be at least one ordinary partner in a limited partnership[53].

Companies or corporations are legal persons in and unto themselves. Individuals own shares in a company but they are not liable personally for the acts of

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[49](cont'd)great grandchild of the transferee; if the property was owned by the transferee and it was Canadian land; and if, in the event of the death of the owner, the land was transferred to the beneficiary within fifteen months. (Source: George Geldart, *Tax Management Strategies for Alberta Farmers*, (Edmonton, Alberta: Alberta Agriculture, Farm Management Branch, 1979), p. 29.).

[50] Capital gains represent the gain in capital property values that owners realize when they sell certain types of property. In Canada capital gains are generally subject to tax. If farmland was owned on the valuation date of December 31, 1971, or was purchased after that date, it is likely that it will be disposed of, at some time, for proceeds which are greater than the valuation day value or cost of that property. This capital gain would create a tax cost in the year the property was disposed of. Farmland is "disposed of" when it is sold; it is gifted; the owner dies; it is taken unlawfully; it is expropriated; it is transferred to a trust, corporation, or partnership; or it is destroyed and compensation is received. Some special capital gains rules come into play for certain kinds of dispositions and these affect the payment of taxes. (Source: George Geldart, p. 16.)

[51] George Geldart, *Tax Management Strategies for Alberta Farmers*, (Edmonton, Alberta: Alberta Agriculture, Farm Business Management Branch, 1979), pp. 38-39.

[52]Harry Warren, lecture given during Agricultural Economics 434 class at the University of Alberta, November 24, 1981.

[53]George Geldart, pp. 40-41.

the company. Generally, when a farm is incorporated, the farmer and his family become employees of the company and they receive a salary. All companies are taxed on their earnings and they are subject to tax benefits and liabilities which are quite different from those of sole proprietorships or partnerships. Individuals holding shares in an incorporated farm operation are likely to employ different estate planning techniques than are individuals in a partnership or sole proprietorship[54].

Recently, another type of business arrangement has been devised. In a joint venture, two or more parties share the work load; share the risk, profits, and losses; and consult with each other. A joint venture is similar to a partnership, but it is not a partnership. In a joint venture agreement a clause can absolve the principals of joint and several liability. The agreement can also state the arrangements that are most suitable to the principals for the purchase of assets. Joint ventures can avoid or aim for certain tax situations that do not apply to partnerships. In short, a joint venture is a type of business structure whose operation is dependent on the content of the clauses which form the joint venture agreement, subject to certain obligatory statements[55].

In Alberta in 1981, approximately 86 percent of census farms were operated under sole proprietorships; 9 percent under partnerships; 4 percent under corporations; and 5 percent under other organization types such as Hutterite colonies[56]. Unfortunately, statistics on privately owned land in Alberta are hard to come by. On this point, the Parlby study notes only that 87.5 percent of the landowners in the 1974 study were individuals and 12.5 percent were partnerships or corporations[57].

In the United States, 90 percent of the owners of privately held farmland were classified as sole proprietor or husband–wife owners but they only owned 74 percent of privately held farmland. Family partnerships and family corporations

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[54]Ibid. pp. 41–43.
[55]Dave Wreford, ed., "The Partnership that Isn't," *Country Guide: The Farm Magazine* (April 1982), p. 58.
[56]Statistics Canada, *1981 Census of Canada: Agriculture, Alberta* (Ottawa: Statistics Canada, 1981): p. 13–1.
[57] G.B.H. Parlby, *An Investigation into Rural Property Ownership in Alberta,* (Edmonton, Alberta: Alberta Land Use Forum, Technical Report No. 6A, 1974): p. 16.

owned 18 percent of the privately owned land, while non-family partnerships and corporations and groups held the remaining 8 percent[58].

Individual land ownership and sole proprietorship business structures are expected to be the dominant forms of business structure shown in the results of the study. Joint venture business structures may have been adopted in place of some partnerships but they are still expected to be fairly uncommon.

Economies of Size

Some studies have suggested, as noted in Chapter Two, that the recent increases in land values are due in part to demand by farmers for tracts of land to add to their holdings. Demand by existing farmers is partly a reflection of their financial ability to purchase land, likely with the assistance of the large capital gains on land they already own. Owners of a debt-free farm may spread the cost of additional land over their entire acreage and bid this advantage into a higher price offer for other land that comes onto the market. In this way, farmers with smaller operations and lower income may be less able to compete in purchasing available local farmland. That is, they may be "priced out of the land market".

A farmer may "spread" the relatively fixed costs of his machinery and family labor over more acreage to the extent that this is possible and so reduce the per acre cost of farming the land. In other words, an operator enjoys cost economies when a larger scale of operation makes it possible to make more effective use of managerial ability or to better use the underutilized capacity of some factors like labor and machinery.

Several technological changes may have created an economic environment conducive to increased farm size. Larger equipment and increased availability and use of chemicals have led to economies of scale. More land can be cultivated in a shorter period of time with less labor and with larger equipment. The producer may be able to (and may need to) distribute the fixed costs of larger machinery over a larger land base. These technological changes may have provided substantial advantages to large farming operations and consequently may have encouraged

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[58]David A Lins, Neil E. Harl, and Thomas L. Frey, *Farmland*, (Skokie, Illinois: Agri Business Publications, 1982), p. 14.

growth in farm size. This may also have caused the feature that, over time, a larger percentage of total farm income has been earned by the larger farms.

D. The Possibility of a "Ripple Effect"

A possible "ripple effect" is thought to be caused by high prices for land in certain areas of the province. In Alberta, farmers may sell their land for very high prices near urban areas or in the area between Edmonton and Calgary and use their profits to bid up land prices in other areas of the province where land prices are not as high, like the Peace River region. The impact of such possible tendency for farmer relocation has been difficult to document and, in fact, very little written information is available on the concept of the ripple effect. Speculative reasoning suggests that a producer who receives high prices for his land and yet who does not wish to stop farming can outbid beginning farmers or those who need large amounts of credit in order to purchase more land. If this tendency exists, it may be enhanced by the rollover provisions in farm capital gains tax law which stipulate that a farmer can sell a farm and buy a similar farm business asset by the end of the taxation year immediately following the year of sale provided certain qualifications are met. In this way, capital gains tax is deferred.

Since documentation of the ripple effect has been difficult, no actual statistics on its existence have been accumulated. This study will attempt to determine if the "ripple effect" occurs and whether it appears to be a major force in affecting the prices for agricultural land in Alberta.

E. Conclusions

From the preceding discussion it is apparent that this study will cover a wide range of topics relating to agricultural land purchases. It is anticipated that specific analyses of the data obtained for the study will be required to provide adequate information on the topics. Observations for residence, age, and occupation groups and financing sources will probably be helpful in discussing the hypotheses formulated. Other information on the existence of off-farm jobs and previous sales will also be useful. Since one of the major purposes of this study is to obtain information on the motivations behind decisions to purchase land, one section of the analysis will be devoted to presentation of these reasons

and their relationship to the different types of buyers found in the study.

IV. METHODOLOGY

A. Introduction

There are generally two basic types of data available for research studies such as this one. These are primary and secondary data. Secondary data which would meet the specific research needs of this study, however, were not available. It was clear that primary data sources would be needed to provide the information called for.

The selection of a research methodology follows from the type of data to be analyzed. The descriptive survey method is appropriate for data derived from primary sources, such as those obtained through a questionnaire. In the following sections of this chapter, the descriptive survey method employed by this study will be outlined in terms of the method of data collection, the population from which the data was derived, and the sampling method.

B. The Questionnaire

There are a wide variety of methods which may be used to collect data. The three basic types of data collection are personal interviews, telephone interviews, and self-enumeration. Self-enumeration through a questionnaire delivered to the respondents in the mail was determined to be the most appropriate method of data collection for this study. The administration procedure for mail questionnaires was considered to be relatively simple and less costly in terms of manpower and money when compared to that for telephone or personal interviews. This method would allow the canvassing of a geographically diverse sample in the Province of Alberta through the central location of Edmonton. All persons selected to be part of the sample could be reached, even if they were not home. A mail questionnaire was also chosen since responses to them have been shown to be as accurate as those obtained through interviews and their anonymity seems to favor more accurate replies on sensitive issues[59]. It was also felt that mail questionnaires would allow the respondent to reflect in privacy and respond at his convenience. This method of data collection would also be free from interviewer bias.

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[59]F.L. Filion, "Increasing the Effectiveness of Mail Surveys," *Wildlife Society Bulletin*, 6 (Fall 1978): pp. 135-136.

Problems can also be associated with a mail questionnaire. Some of the major problems with this type of data collection lie with the respondents: they do not automatically return mail questionnaires; they do not always fully complete questionnaires; and the wrong person may fill out the questionnaire. The quality of replies is also a matter of concern[60]. These problems were reduced and controlled by ensuring that certain conditions were satisfied in the mail survey. A relatively complete mailing list was available. Questions were clearly formulated and structured. The questionnaire was complete but reasonably short and simple to understand. Finally, procedural techniques were planned and executed so that survey participation would be maximized. These conditions helped ensure satisfactory results from the mail survey and helped to minimize biases due to survey sponsorship, memory failure, and question wording.

Mail surveys are often criticized because of the low response rates which they may elicit. High response rates tend to reduce nonresponse bias and increase the precision of survey estimates. Mail questionnaire response rates may be improved by motivating the respondents to answer the questionnaire. Motivation may be enhanced by sending an advance letter explaining the nature and purpose of the survey to members of the sample before the questionnaire is mailed and by enclosing a self-addressed, postage paid return envelope with each questionnaire[61]. In this study, potential respondents were mailed a covering letter along with the questionnaire. A copy of this letter is shown in Appendix A. This letter explained the nature of the survey and attempted to convince the recipient that his response was required. The letter also emphasized the ease with which the questionnaire could be completed and returned. An expression of appreciation for a reply and an individually signed letter were also used in an effort to obtain a high response rate.

Response rates to mail surveys may also be improved by careful consideration of the format, content and attractiveness of the questionnaire[62]. The length of the questionnaire and the ease with which it could be completed were felt to be important considerations. Questions were not overcrowded and they were formulated so that there

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[60] John B. Lansing and James N. Morgan, *Economic Survey Methods* (University of Michigan, Ann Arbor, Michigan: Survey Research Center of the Institute for Social Research, 1971), p. 104.
[61] Filion, p. 137.
[62] Statistics Canada, Basic Questionnaire Design (n.p.: August 1979), pp. 103-104.

was a standard way of answering them. Ease of editing, coding and keypunching were also considered in the questionnaire format. The questionnaire contained a description of the subject under investigation and noted the benefits of the survey. Instructions for the completion of the questionnaire were included. The questions showed some logical interdependence and shorter, easier, questions were asked first to encourage the respondents. An attempt was made to use clear language which would be understood by all respondents. Questionnaire attractiveness was enhanced by paper quality and size and style of print. Maintaining a high level of quality control in the printing of the questionnaire also improved its attractiveness. A copy of the questionnaire is given in Appendix A.

Follow-ups are one of the most effective techniques used to maximize the rate of returns. A follow-up is a reminder which implies that a response is important[63]. Mail follow-ups may take various forms including a simple postcard reminder or a formal letter. In this study, a reminder consisting of a second covering letter and another copy of the questionnaire were sent to every member of the sample with the exception of those respondents who did not receive the first mailing[64]. This insured that an attempt was made to contact each respondent at least once. A copy of the second letter is given in Appendix A.

C. The Population

One of the most important decisions to be made in research is the selection of subjects to study. The population under study is seldom used in its entirety because of the high costs attributed to obtaining information if the population or geographical area is large. Instead, a sample of the population is generally drawn for study. The basic idea in sampling is that the analysis of some of the elements in a population provide useful information on the entire population[65]. Since a list of agricultural land transferees was available, it became necessary only to adjust that list to fit the requirements of the study. The discussion that follows outlines how the population list was formed and describes the adjustments made to that list in order that a sample could be drawn from it.

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[63] Filion, p. 139.
[64] These respondents usually had moved and left no forwarding address or they failed to pick up their mail from General Delivery at their local Post Office.
[65] C. William Emory, *Business Research Methods* (Homewood, Illinois: Richard D. Irwin, Inc., 1976), p. 135.

The Alberta Land Titles System

Legal Descriptions

Most of the land in Alberta has been surveyed on the basis of the Third System of Township Surveys[66]. Under this system, land is described by meridians, ranges, townships and sections. There are three meridians, or lines of longitude, which run north and south through Alberta. Land is described as being West of the 4th, 5th, or 6th Meridian. Between the meridians are columns called Ranges. Ranges are consecutively numbered from east to west beginning at each meridian. Rows of Townships then cross meridians and ranges. Township rows are consecutively numbered beginning with the most southerly one on the U.S. border and moving to Township Row 126 which is on the Northwest Territories boundary. Each of the areas marked off by township rows and range columns is called a Township. Townships are six miles square and contain 36 one mile square Sections. Sections, which contain about 640 acres, are further divided into four Quarter-Sections, each of which contains about 160 acres. Quarter-Sections are referred to by their directional positions (ie. Northwest, Southwest, Northeast and Southwest)[67]. This system is described in Figure IV.1.

Meridians, ranges, townships and sections are used to legally describe land which has not been subdivided. Unsubdivided land is also called rural land. Subdivided land, as for a city, town, village or acreage, is legally described by Plan, Block, Lot and Unit numbers depending on the land being described. Agricultural land in this study is described by meridian, range, township and section.

Surface and Mineral Rights

Land generally refers to that which extends from the center of the earth to the outer limit of the atmosphere. Up to 1887, the Dominion of Canada granted mineral rights with surface rights to land; after that no mineral rights were issued. In 1905, Alberta became a province and in 1930, the power to grant both surface and

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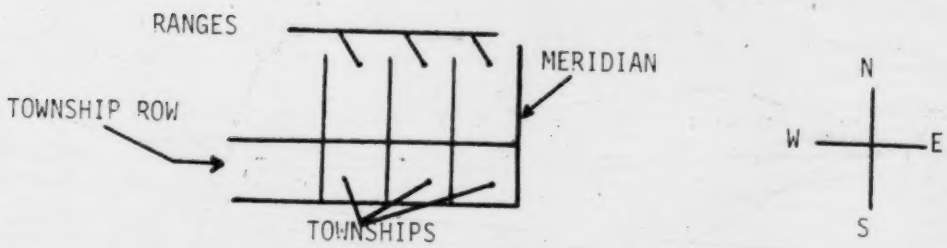
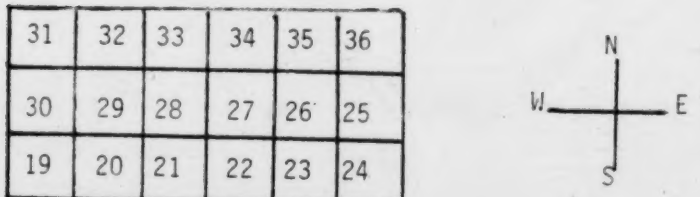
[66] In 1870, the Hudson's Bay Company surrendered "Rupert's Land," to which it held extensive rights, to the Dominion of Canada. This area extended from east of Winnipeg to the Rocky Mountains. The new Territories were surveyed by this system.

[67] Alberta Attorney General, *An Introduction to Alberta Land Titles*, (Edmonton, Alberta: n.p., 1980), pp. 4-6.

MERIDIANS, RANGES, AND TOWNSHIPS



SECTIONS WITHIN A TOWNSHIP



QUARTER-SECTIONS WITHIN A SECTION

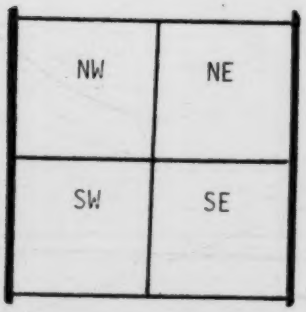


FIGURE IV.1: 1981 Alberta Land Survey: The Third System of Township Surveys

mineral rights was transferred from the Government of Canada to the Government of Alberta. The province will lease but not sell any of the mineral rights it owns. This means that if a person owns surface rights to land in Alberta he probably owns only the surface, the air above it and the soil below it. It is unlikely that he owns the minerals. A owner of mineral rights to a parcel of land may own one, several or all the minerals in that parcel. Mineral certificates specifying what minerals are owned by whom on a specific date, and what mines and minerals are shown in the disposition are issued to concerned parties before any transfers, mortgages or leases of mineral interests occur.

Ownership of Land

A person may be the sole owner of a parcel of land or he may be a joint tenant or a tenant-in-common with one or more persons. When a joint tenant dies the surviving tenants acquire his interest in the land. When a tenant-in-common dies, his share of the land goes to his heirs, not to the surviving tenants. Joint tenancy must be stated on the title, or the tenancy defaults to tenancy-in-common.

The greatest interest an individual can have in land is called an estate in fee simple. In this case an individual's rights to land are subject only to applied government restrictions. The owner of a fee simple holds it for all time present and future, but it may be returned to the government in the event of his dying without heirs and without having a will outlining its disposition. Life estates (where ownership is granted only for the duration of a specific person's lifetime) and leasehold estates (where ownership is granted for a specific number of years) constitute lesser interests in land[6].

The Land Titles Offices

There are two land title registration offices in Alberta. The South Alberta Land Registration District office is in Calgary and it is responsible for all the land from the U.S.A./Alberta border to, and including, Township 34. The North Alberta Land Registration District office is in Edmonton and its responsibilities apply to the land from Township 34 to the Alberta/ Northwest Territories boundary. Figure IV.2

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[6] J.E. Smyth and D.A. Soberman, *The Law and Business Administration in Canada* (Scarborough, Ontario: Prentice-Hall of Canada, Ltd., 1964), pp. 509-511.

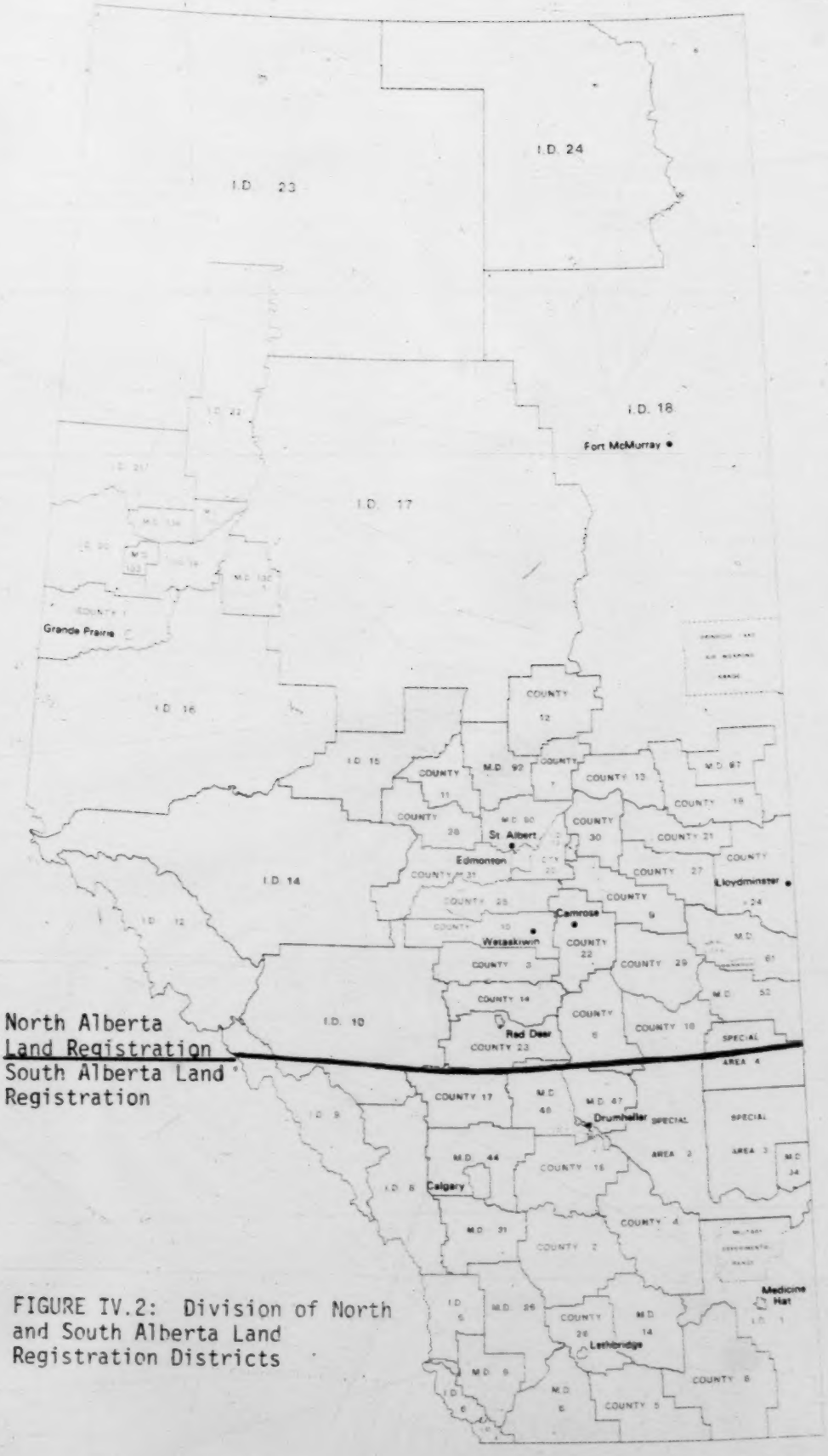

FIGURE IV.2: Division of North and South Alberta Land Registration Districts

indicates this division of the province.

The Land Titles Offices examine documents submitted for registration against land in Alberta. After they are accepted and registered, the offices record the details of the documents and their registration on the appropriate land titles. Each Office also provides title, document and survey searches for legally described property in Alberta to the public. This form of land ownership and transfer is the Torrens System. Under this system, the government guarantees the accuracy of the title. Through this guarantee, an individual trying to discover the state of a title will receive a complete statement of that title, valid to the moment the statement is issued. If errors are made by the Land Titles Offices and a loss is suffered, the Assurance Fund provides compensation in monetary form to the affected party. All transferees must pay an Assurance Fund fee which is based on their, or their agent's, opinion of value for the land under consideration at the time of registration. In other words, Assurance Fund values represent the present value of land for the purpose of the transaction. Fees are charged on the basis of this value and the money received is deposited to the Fund.

Legal documents, such as transfers, authorize the Land Titles Offices to issue Certificates of Title to land. These certificates are prepared in triplicate. The original Certificate of Title is kept in the Land Titles Office; the Duplicate Certificate of Title is issued to the landowner if there are no mortgages outstanding against the land; and the Land Title Change form is forwarded to the appropriate municipal authority for updating of its taxation records. The Certificate of Title is the sole source of information on a title. A copy of a Certificate of Title is given in Appendix A.

The front of the title contains the legal description of the property, the nature of all surface and mineral rights against the property and the names of the owners of these rights. The back of the title is used to record all registrations. Charges against the land are registered on the left side of the title; discharges are registered on the right side of the page. The amount of land included on any one title is restricted to a maximum of one section for unsubdivided (rural) land.

Alberta Municipal Affairs Land Title Changes Listing

The Central Services Branch, Alberta Municipal Affairs maintains, updates, and on a quarterly basis, produces and distributes a computer listing of all the land title changes which occur in each calendar year in the Province of Alberta (excluding Edmonton and Calgary). The information for this listing is obtained from the Land Title Change forms completed for each property transaction by the North and South Land Titles Offices.

An example of the information given in the Alberta Municipal Affairs land title changes listing is given in Figure IV.3. This example is a copy of one page of this listing. The listing contains the following information:

1. legal description (meridian, range, township, section)
2. plan number
3. block number
4. lot number
5. number of lots
6. land use (indicates the use of a parcel other than normal residential or farming uses)
7. parcel size in acres
8. certificate of title number
9. portion code (refers to part of a block or lot involved in the change)
10. status code (provides ownership status other than a private individual)
11. interest (indicates the extent of the ownership by those listed on the change form)
12. card number (used to edit and correct the listing)
13. Canada Land Inventory record (indicates the main soil capability class in each quarter section in a title)
14. Assurance Value per acre
15. registration date by month and year
16. Assurance Value total

The listing from which the study sample was drawn included rural areas sorted by municipality and legal description with the exception of Improvement Districts 4,9,12,13 and 24 which are National Parks.

The final listing obtained from Alberta Municipal Affairs contained all the changes made to land titles in Alberta in 1981. The list was 473 pages long and contained over

PGM=MALTLIST ALBERTA MUNICIPAL AFFAIRS - CENTRAL SERVICES BRANCH DATE: 820624 @ 1650

VERSION 3.00 LAND TITLE CHANGES - 1981 L.T.C. - RURAL PARCELS > 60 AC.

MUNICIPALITY: M135 MUNICIPAL DISTRICT OF PEACE NO. 135 PAGE 528

LEGAL DESCRIPTION S S N N E W W E SC TWP RG M	PLAN NUMBER	BLK	LOT	NO. OF LOTS	LAND USE	PARCEL SIZE ACRES	CERTIFICATE OF TITLE NO.	P O R	I S N T	CARD NUMBER	C L I	ASSURANCE VALUE PER ACRE	REG. DATE MO YR	ASSURANCE VALUE
NW 27 082 25 5						159.00	812260690A	Z		079243	2	11	11 81	1,800
NE 28 082 25 5						159.00	812260690	Z		079244	2	15	11 81	2,500
NE 36 082 25 5						163.01	812033095			008799	2	460	02 81	75,000
SE 06 083 25 5						165.00	812145649B			043743	3	242	06 81	40,000
NE 07 083 25 5						160.00	812099119A			030489	3	264	05 81	42,300
SW 17 083 25 5						160.00	812099119			030488	3	264	05 81	42,300
NE 18 083 25 5						160.00	812193921			060631	3	781	08 31	125,000
NE 24 083 25 5						160.00	812009550			002465	3	187	01 81	30,000
NWNE 25 083 25 5						109.30	812241225			073700	3	439	10 81	48,000
SW 25 083 25 5						159.00	812241226			073701	3	301	10 81	48,000
SE 25 083 25 5						140.30	812241227			073702	3	342	10 31	48,000
SWNW 34 083 25 5						320.00	812044745A	E		012395	3	50	02 81	16,000
SE 34 083 25 5						160.00	812044745	E		012396	3	25	02 81	4,000
NW 36 081 26 5						160.00	812060685			017167	2	312	03 31	50,000
NW 11 082 26 5						157.01	812148550			044617	2	509	06 81	80,000
SW 11 082 26 5						159.00	812148551			044616	2	245	06 81	39,000
SE 11 082 26 5						158.00	812014813			003961	2	363	01 81	57,500
NW 22 082 26 5						156.59	812069873A	C		020272	3	191	03 81	30,000
NW 25 082 26 5						159.00	812018614D			004602	3	220	01 81	35,000
NE 26 082 26 5						159.00	812018614C			004601	3	355	01 81	56,500
NW 26 082 26 5						159.00	812018614B			004600	3	440	01 81	70,000
SW 26 082 26 5						99.60	812253587			076342	4	428	10 81	42,676
NE 27 082 26 5						128.70	812018614A			004599	3	271	01 81	35,000
SW 27 082 26 5						99.00	812069873E	C		020275	4	303	03 81	30,000
SESW 28 082 26 5						73.00	812069873D	C		020274	6	410	03 81	30,000
NE 35 082 26 5						162.01	812145649			043741	3	808	06 81	131,000
NW 35 082 26 5						161.01	812069873	C		020271	3	186	03 81	30,000
SW 35 082 26 5						159.00	812069873B	C		020273	3	183	03 81	30,000
SE 35 082 26 5						159.00	812018614			004598	3	355	01 81	56,500
NW 36 082 26 5						162.01	812145649A			043742	3	246	06 81	40,000
SW 36 082 26 5						159.00	812018614E			004603	3	220	01 81	35,000
NE 14 083 26 5						160.00	812305435			091181	3	127	12 81	20,400
SE 23 083 26 5						160.00	812305435A			091182	3	197	12 81	31,600

FIGURE IV.3: 1981 Alberta Land Survey: Sample of Alberta Municipal Affairs' Land Title Changes Listing for Alberta in 1981.

20,000 changes. Changes to titles can occur for any number of reasons. A change in name, a transfer into the name of an executor of an estate, a transfer of provincial crown land to private ownership, and a transfer from a seller to a buyer all involve a change to a title and cause that title to be included in the Land Title Changes List.

The Land Title Changes List includes all changes in land ownership. It does not differentiate between land used for residential or farming purposes. Because this study concentrates primarily on transfers of agricultural land and to facilitate comparison with analysis of assurance fund land value tabulations by Alberta Agriculture, the acceptable land title changes were restricted to parcels of over sixty acres. This reduced the population studied to slightly more than 17,700 land title changes. The population could more accurately be defined as the list of all land title changes to agricultural land in Alberta, in 1981.

D. The Sample

Sampling is based on two premises. The first is that the elements in the population are similar enough that some of them will adequately represent the characteristics of the population. The second premise is that the sample can be drawn in such a way that variations in item values tend to counteract each other. This counteraction tendency should result in a sample value generally close to the population value. For this offsetting to occur there must be enough elements in the sample and they must be drawn so that neither the overestimating nor the underestimating tendencies are favored[69].

A valid sample must be accurate or free from bias. There are no known or unknown influences affecting the sample scores in an accurate sample. A sample must also be precise. In theory a precise sample differs from the population only as a result of random fluctuations inherent in the sampling process[70].

Sampling Technique

There were a variety of sampling techniques available. The one selected for this study was chosen on the basis of the requirements of the project, its objectives and the funds available. Probability sampling was chosen because it is based on the concept of

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[69]Emory, p. 135.
[70]Emory, p. 136.

random sampling. This procedure assures that each member of the population has a known non-zero chance of selection. Further to this, the population elements being studied in this project had an equal chance of being selected into the sample. This sampling procedure is called simple random sampling.

Sample Size

Besides being dependent on the population to be studied, an appropriate sample size must consider cost and the data collection method. Since the method of collection was to be by self-administered questionnaire mailed to respondents and funds for administration of the questionnaire were budgeted to approximately $6,000, sample size could not be larger than 2,000. Since response rates are generally low for mail questionnaires and the percentage of purchasers (the primary unit of analysis) in the population was unknown, the decision was made to select the maximum sample size of 2,000.

Selection of Sampling Units

To facilitate the choice of the elements for the sample, an entry number of four was drawn at random, "from a hat". This number indicated that the fourth element on the population list was to be the first element on the sample list. Since the population contained over 17,000 elements and approximately 2,000 of these elements were to be included in the sample, it was determined that every eighth land title change should become part of the sample. This selection process would yield over 2,200 units, but it was realized that some of the changes selected would likely be for the same landowner. Since each landowner was to receive only one questionnaire, replacements would be available for those names which appeared twice on the sample list.

The list of land title changes included in the sample was submitted to the Land Titles Offices. A photocopy of each title appearing on the list was obtained. These photocopies provided the names and addresses of those individuals to be surveyed.

The occurrence of duplicate names proved to be more frequent than had been expected. This necessitated the selection of a supplementary sample which was taken on the same basis as the first sample, with the exception of the selection number which was

eighty. The final sample list contained the names and addresses of 1,990 individuals, companies, hutterite colonies, and provincial organizations. Many titles indicated that two or more parties owned the land in question. In these cases the first name appearing on the title was selected to be part of the sample. The number of transfers sampled in each municipality is shown in Appendix A.

The Pretest

Pretesting, which is a standard procedure in surveys, is highly recommended for improving questionnaire design and thus enabling increased reliability and validity of responses. Ambiguous questions, poor wording and incomplete sets of answers are often brought to light in a pretest.

On November 8, 1982, fifty sampling units were selected at random to be part of the questionnaire pretest for the study. Each unit was mailed a copy of the questionnaire and a self-addressed, stamped envelope. A thirty-four percent response rate was achieved from the pretest. No indication was given on the questionnaire that it was a pretest. Pretest responses indicated the need for some changes in the questionnaire but because the changes were not extensive the pretest responses were transferred to the improved questionnaire as accurately as possible and were included in the final sample and response analysis. Those in the pretest sample did not receive a separate second mailing. They were sent a second mailing at the same time as were the balance of the sample. Although failing to separately send the second mailing to the pretest sample did not allow the determination of the improvement in response rates from a second mailing, discussions with other researchers on the success of second mailings suggested that the response rate of the total survey might be expected to increase by 50 percent with a second mailing.

V. RESULTS OF THE 1981 ALBERTA LAND SURVEY

A. Response Rates of the Survey

A total of 1,990 questionnaires were mailed on December 8, 1982 to the individuals selected through the sampling process to provide the data for the study. A total of 638 responses were obtained to the first mailing. One hundred of the questionnaires were returned unopened by the post office and, as it was not possible to trace the mailing addresses of these individuals, they were subtracted from the sample. These individuals did not receive a second copy of the questionnaire. On January 23, 1983 a second copy of the questionnaire was mailed to the remaining 1,890 individuals. A total of 310 responses were obtained from the second mailing. Thirty-five of the questionnaires were returned unopened by the post office. This left the final sample size of the survey at 1,855. The total response rate of the survey was 51.5 percent or 948 acceptable responses. Assuming the thirty-five individuals whose questionnaires were returned unopened in the second mailing did not receive the first mailing, the first mailing had a response rate of 34.4 percent and the second mailing had a response rate of 16.7 percent. The response rate to the second mailing, therefore, was about half that of the first mailing. This result is consistent with the expectation outlined in Chapter 4.

It is usually assumed that the response rate to a questionnaire administered through the mail will be low and that various techniques should be employed to improve that rate. The use of several of these techniques in this study appears to have been successful. Consideration should also be given, however, to the topical nature of the study in regard to the increase in land values from 1970 until late 1981 and their subsequent stabilization in late 1981 and in 1982. Increasing public awareness of the problems associated with landownership in Alberta may have generated interest and a desire for more information. The relatively large number of individuals from the sample who requested a copy of the results of the study would seem to support this.

B. Testing for Non-Response Error

Non-response error is the type of error which can result when a researcher encounters difficulties in locating a respondent who has been selected into the sample. A bias can result when the non-respondents vary from the respondents in some systematic way. Ideally the existence of a bias could be determined by comparing the two groups. In this survey, it was not possible to test whether or not respondents differed from non-respondents. Since two mailings of the survey were completed, however, it was possible to determine if any significant differences existed between the first and second mailings. The existence of differences would mean that the respondents to the first and second mailing came from different populations and that something may have motivated respondents to the first mailing that did not motivate respondents to the second mailing or visa versa. This would suggest that some non-response error was present in the results and appropriate corrective measures would be necessary. The Mann-Whitney U test was used to test for significant differences between the two mailings. Only the null hypothesis that there was no difference in education of respondents who purchased land in the first and second mailings was rejected at a .05 level of significance. The average number of years of education of the respondents to the first mailing was 12.5 and to the second mailing was 11.8. Forty-two percent of the respondents to the first mailing had obtained an education higher than the median education of 12 years, by December 31, 1981. Only 35 percent of the respondents to the second mailing had obtained more than 12 years of education.

The rejection of the null hypothesis that there was no difference in education between the first and second mailing signifies the existence of some non-response error. From the results, it would appear that there is a slight bias in the sample towards more educated purchasers responding to the first mailing. This may be due to an ability, on their part, to read faster and to comprehend easier the nature and meaning of the questions. More educated individuals may be more knowledgeable of the importance of responses to questionnaires in obtaining meaningful study results. They may also have a desire for more information on the topic. It was felt that the remainder of the data and the general results of the survey would not be seriously affected by this bias.

C. Frequency Distributions

Land Title Transfers

The frequency distribution for respondents reasons for the land title changes they were involved in, in 1981 are shown in Table V.1. Of the 948 individuals who responded to the mail survey, 482 (50.8 percent) had been involved in a land transfer for the purpose of purchasing agricultural land in Alberta in 1981. Over 49 percent of the respondents were involved in a title change for a reason other than a purchase of agricultural land. Eighty-seven (9.1 percent) of the 948 respondents were party to at least one other title change. Almost 53 percent of these 87 respondents were involved in a family transfer; 12.6 percent in an estate transfer; and 8 percent in a change of name.

While more of the respondents were expected to indicate a second reason for a title change, since a fairly large number of duplicate names were encountered in choosing the sample for the survey, the respondents may not have remembered any other changes in 1981. Some of the purchasers may have included more than one agricultural land purchase under the same title change without realizing that their purchase may actually have involved several title changes. This might explain why none of the respondents indicated that they had been involved in more than one title change for the reason of purchasing agricultural land.

Age of Respondents

The distribution of ages of respondents who purchased agricultural land is indicated in Tables V.2 and V.3. The mean age, as of December 31, 1981, of purchasers of agricultural land in the survey was 36.98 years. The minimum age of any purchaser was 17 years; the maximum age was 83 years. The standard deviation of this variable among responses was 12.15 years, indicating that 68.26 percent of the purchasers were between the ages of 25 and 49.

TABLE V.1: 1981 Alberta Land Survey Frequency Distributions: Respondents' Reasons for Land Title Changes in Alberta in 1981

REASON FOR CHANGE	REASON FOR 1ST CHANGE		REASON FOR 2ND CHANGE		REASON FOR 2ND CHANGE IF FIRST CHANGE WAS BOUGHT AG. LAND	
	NO.	%	NO.	%	NO.	%
Bought agricultural land	482	50.8	0	0.0	0	0.0
Bought non-ag. land	16	1.7	2	2.3	2	3.9
Change in name	57	6.0	7	8.0	6	11.8
Transfer in family	195	20.6	46	52.9	32	62.7
Transfer from creditor	30	3.2	5	5.7	1	2.0
Estate transfer to executor	78	8.2	11	12.6	1	2.0
Other reason	51	5.4	9	10.3	6	11.8
Reason for change unknown	39	4.1	7	8.0	3	5.9
TOTAL	948	100.0	87	100.0	51	100.0

TABLE V.2: 1981 Alberta Land Survey Frequency Distributions: Age of Agricultural Land Purchasers on December 31, 1981 in Comparison with Statistics Canada 1981 Information

STATISTICS CANADA AGE CATEGORY*	AGE DISTRIBUTION OF STATISTICS CANADA, 1981 ALBERTA CENSUS FARM OPERATORS**		AGE DISTRIBUTION OF THE SURVEY RESPONDENTS	
	Relative Frequency (%)	Cumulative Frequency (%)	Relative Frequency (%)	Cumulative Frequency (%)
15–19 years	.3	.3	4.0	4.0
20–24 years	3.1	3.4	13.0	17.0
25–29 years	7.8	11.2	15.0	32.0
30–34 years	10.2	21.4	19.0	51.0
35–39 years	11.5	32.9	15.0	66.0
40–44 years	12.4	45.3	10.0	76.0
45–49 years	12.8	58.1	9.0	85.0
50–54 years	13.1	71.2	8.0	93.0
55–59 years	11.3	82.5	6.0	99.0
60–64 years	8.7	91.2	1.0	100.0
65–69 years	5.2	96.4	0.0	100.0
70 years plus	3.9	100.0	0.0	100.0
TOTAL	100.0	100.0	100.0	100.0

*Age categories are those used by Statistics Canada.
** Statistics Canada, *1981 Census of Canada: Agriculture, Alberta,* (Ottawa: Statistics Canada, 1981), p. 13–1.

TABLE V.3: 1981 Alberta Land Survey Frequency Distributions: Age of Agricultural Land Purchasers on December 31, 1981 in Comparison with Alberta Statistics 1981 Information

ALBERTA STATISTICS AGE CATEGORY*	AGE DISTRIBUTION OF ALBERTA STATISTICS 1981 CENSUS FARM OPERATORS**		AGE DISTRIBUTION OF THE SURVEY RESPONDENTS	
	Relative Frequency (%)	Cumulative Frequency (%)	Relative Frequency (%)	Cumulative Frequency (%)
0–24 years	3.5	3.5	16.7	16.7
25–34 years	17.9	21.4	33.7	50.4
35–44 years	23.5	44.9	23.6	74.0
45–54 years	26.0	70.9	16.5	90.5
55–59 years	11.3	82.2	6.4	96.9
60–64 years	8.7	90.0	1.7	98.6
65–69 years	5.2	96.1	1.1	99.7
70 years plus	3.9	100.0	0.3	100.0
TOTAL	100.0	100.0	100.0	100.0

*These age categories are those used by Alberta Statistics.
**These statistics were collected by Statistics Canada but the distributions are those found in Alberta Agriculture, *Agriculture Statistics Yearbook, 1981*, (Edmonton, Alberta: Alberta Agriculture, Statistics Branch, 1981), p. 74.

In comparing the age of respondents to this survey with Statistics Canada's 1981 Census, it is evident that the survey respondents were young relative to the 1981 census-farm operators in Alberta[71]. Most of the survey respondents were between 25 and 44 years while those in the census were mostly between 35 and 54 years[72]. Alberta census statistics show that in 1981 only about 45 percent of farm operators were less than 45 years old while the comparative statistic from this survey of land purchasers was that 74 percent of them were less than 45 years old[73]. It is important to note that the average age of Alberta farm operators according to the 1981 census was 46 years; this was 9 years greater than the average age of the survey respondents. It appears that many 1981 agricultural land purchasers may have been beginning farmers and accordingly, may have been relatively young.

Education of Respondents

This variable measured the number of years of education obtained by agricultural land purchasers responding to the survey. The most commonly occurring value was 12 years which generally represents graduation from high school. The average number of years of education obtained by the respondents was 12.388 and over 68 percent of all the respondents had received between 9.7 and 15 years of education. The distribution of this variable is shown in Table V.4.

The education statistics from the 1981 census were not available for comparison with the survey results but Paul Shaw, in a study completed for Statistics Canada, found that 47.5 percent of census-farm household heads in Alberta in 1971 had less than a grade nine education[74]. Only 6 percent of the purchasers in this study recorded less than a grade 9 education. This may be a reflection of the comparatively young age of respondents in this sample. Higher levels of education, at least to the completion of high school, may have become much more frequent in the very innovative field of agriculture.

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[71]According to the 1981 Census, a census farm is a ranch, farm or other agricultural holding with sales of agricultural products during the past 12 months of $250 or more. This included operations with anticipated sales of $250 or more in 1981. A census farm operator is the person who is responsible for the day-to-day decisions made in the operation of the holding.

[72]Statistics Canada, *1981 Census of Canada: Agriculture , Alberta* (Ottawa, Ontario: Minister of Supply and Services, October 1982), p.13-1.

[73] Alberta Agriculture, *Agriculture Statistics Yearbook, 1981*, p. 74.

[74] Paul Shaw, *Canada's Farm Population* (Ottawa, Ontario: Minister of Industry, Trade and Commerce, Statistics Canada, 1979), p. 40.

TABLE V.4: 1981 Alberta Land Survey Frequency Distributions: Years of Education Completed by Agricultural Land Purchasers as of December 31, 1981

YEARS OF FORMAL EDUCATION	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)
0-8 years	29	6.2	6.2
9-11 years	116	24.9	31.1
12 years	134	28.8	59.9
13-14 years	99	21.2	81.1
15-16 years	61	13.1	94.2
17-21 years	26	5.6	100.0
TOTAL	465	100.0	100.0

TABLE V.5: 1981 Alberta Land Survey Frequency Distributions: Residence of Agricultural Land Purchasers on December 31, 1981

RESIDENCE CATEGORY	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)
Outside of Canada	2	0.4
In Canada, outside Alberta	5	1.1
In Alberta, in a city*	37	7.8
In Alberta, in a town**	44	9.3
In Alberta, on a farm	373	78.9
Other residence	12	2.5
TOTAL	473	100.0

*city: population 10,000 and over
**town: population under 10,000

Some individuals with agricultural backgrounds who would like to farm may have been forced to obtain a higher education in order to obtain a non-farm job. It must be remembered as well that a proportion of the purchasers were not agriculturally oriented. Non-farming individuals have been shown to have higher levels of formal education than farm operators and this may have had an upward influence on the survey results.[75].

Residence of Respondents

Of the 482 purchasers who responded to the survey, 473 indicated their place of residence. The distribution of this variable is given in Table V.5. Approximately 79 percent of the respondents indicated they were living on a farm in Alberta on December 31, 1981. Statistics Canada information on the residence of census-farm operators in the province in that same year shows that over 91 percent of operators resided on the farm operated[76]. The relatively lower percentage of survey respondents residing on a farm in Alberta may be due to the inclusion of non-farmers, who may be less likely to reside on farms, in the sample.

The number of questionnaires returned by respondents from each of the six areas of residence provided in the questionnaire were compared with the number of questionnaires mailed out to these areas. Similar rates of response from all six areas of residence suggested that the survey results were fairly representative. The response rates from the six areas of residence were as follows: outside Canada, 28.6 percent; outside Alberta, 15.6 percent; and inside Alberta, 25.6 percent. It should be noted, however, that these are the response rates of those respondents who purchased agricultural land in 1981. Those who did not purchase agricultural land were not asked to provide their place of residence in the questionnaire.

Occupation of Respondents

The occupation of purchasers responding to the survey was overwhelmingly "agriculture" as is indicated in Table V.6. Agricultural occupations for the purpose of this study were definded to include farming and ranching. The other more common responses were from purchasers whose occupation was in education, health, or welfare and

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[75]Ibid. p. 39.
[76]Statistics Canada, *1981 Census of Canada: Agriculture, Alberta*, p. 13-1.

TABLE V.6: 1981 Alberta Land Survey Frequency Distributions: Occupation of Agricultural Land Purchasers on December 31, 1981

OCCUPATION CATEGORY*	RESPONDENTS DECLARING ONE OCCUPATION		RESPONDENTS DECLARING TWO OCCUPATIONS		RESPONDENTS WHO DECLARED BOTH AN AGRICULTURAL AND A NON-AG. OCCUPATION	
	NO.	%	NO.	%	NO.	%
1	420	88.8	2	1.5	0	0.0
2	1	0.2	13	9.8	13	10.2
3	6	1.3	33	25.0	32	25.2
4	11	2.3	15	11.4	15	11.8
5	12	2.5	38	28.8	38	29.1
6	8	1.7	15	11.4	14	11.0
7	4	0.8	8	6.1	8	6.3
8	6	1.3	3	2.3	3	2.4
9	3	0.6	4	3.0	3	2.4
10	2	0.4	1	0.8	1	0.8
TOTAL	473	100.0	132	100.0	127	100.0

*OCCUPATION CATEGORIES:
1. Agriculture (farming, ranching)
2. Forestry, fishing, trapping
3. Mining, quarrys, oil wells
4. Education, health, welfare, services
5. Construction, transportation, communications, other utilities
6. Retail trade, wholesale trade, sales
7. Finance, insurance, real estate
8. Manufacturing
9. Retired
10. Not employed

construction, communications, or transportation Only 132 of the purchasers indicated that they had more than one occupation. Of these, 25 percent were employed in mining, quarrys or oil well work, and 28.8 percent were employed in construction, transportation, or communications work.

Of purchasers giving agriculture as an occupation, only 30.2 percent indicated they had another second occupation. Of all those indicating two occupations, 96.2 percent gave agriculture as one of them. Only 4.8 percent of the purchasers who were not employed in agriculture indicated they had a second occupation. Second occupations given by agricultural purchasers were predominantly mining, quarrys, or oil wells and construction, transportation or communications.

Given the high proportion of respondents who resided on a farm in Alberta, it may not have been unusual to also find that a high proportion of them (88 percent) were employed in agriculture. That a relatively large proportion of purchasers with more than one occupation were involved in mining, quarrys, or oil wells (25 percent), may be explained by the importance of the oil and gas industry in this province. Many jobs in these fields, as well as in construction and transportation, operate with flexible hours and shifts. Many of them pay fairly well and can be restricted to winter work only. These factors may facilitate the use of these types of jobs as a means for individuals to enter into part- or full-time farming.

For the remainder of the study the occupations of respondents will be reclassified as either agricultural or non-agricultural. This was done for ease of comprehension and to facilitate the detailed analyses which follow in Chapter VI.

Extent of Off-Farm Jobs Among Respondents with an Agricultural Occupation

This particular portion of the survey was applicable only to those purchasers who indicated their occupation was agricultural in nature. The distributions of off-farm jobs among respondents with agricultural occupations and their spouses are shown in Tables V.7, V.8, and V.9. Over 79 percent of the respondents with agricultural occupations implied that they had a spouse before they purchased land in 1981. Of these spouses, 28 percent had worked off the farm in 1981 before the land was purchased (Table V.7). Over 83 percent of the respondents who had an agricultural occupation implied that they

TABLE V.7: 1981 Alberta Land Survey Frequency Distributions:
Occurrence of Off-Farm Jobs for Agricultural Land Purchasers with an Agricultural Occupation

HAD AN OFF-FARM JOB?	RESPONDENT 1981*		RESPONDENT 1982**		SPOUSE 1981***		SPOUSE 1982****	
	No.	%	No.	%	No.	%	No.	%
YES	166	40.2	180	43.8	91	28.0	107	31.3
NO	247	59.8	231	56.2	234	72.0	235	68.7
TOTAL	413	100.0	411	100.0	325	100.0	342	100.0

*Indicates respondents who had, and did not have, an off-farm job before agricultural land was purchased in 1981 (Question #8).
**Indicates respondents who had, and did not have, an off-farm job in 1982 (Question # 10).
***Indicates respondents' spouses who had, and did not have, an off-farm job before agricultural land was purchased in 1981 (Question #9).
****Indicates respondents' spouses who had, and did not have, an off-farm job in 1982 (Question # 11).

TABLE V.8: 1981 Alberta Land Survey Frequency Distributions: Occurrence of Off-Farm Jobs for Agricultural Land Purchasers with an Agricultural Occupation, who had an Off-Farm Job in 1981 Before They Purchased Agricultural Land

HAD AN OFF-FARM JOB?	RESPONDENT 1982*		SPOUSE 1981**		SPOUSE 1982***	
	No.	%	No.	%	No.	%
YES	137	82.3	78	47.0	73	44.0
NO	29	17.7	88	53.0	93	56.0
TOTAL	166	100.0	166	100.0	166	100.0

*These figures indicate those respondents who had an off-farm job in 1981 before agricultural land was purchased (Question #8) and also had, or did not have, an off-farm job in 1982 (Question #10).
**These figures indicate those respondents who had an off-farm job in 1981 before agricultural land was purchased (Question #8) and also had a spouse who had, or did not have, an off-farm job before agricultural land was purchased in 1981 (Question #9).
***These figures indicate those respondents who had an off-farm job in 1981 before agricultural land was purchased (Question #8) and also had a spouse who had, or did not have, an off-farm job in 1982 (Question #11).

TABLE V.9: 1981 Alberta Land Survey Frequency Distributions: Occurrence of Off-Farm Jobs for Agricultural Land Purchasers with an Agricultural Occupation, who had an Off-Farm Job in 1982

HAD AN OFF-FARM JOB?	RESPONDENT 1981*		SPOUSE 1981**		SPOUSE 1982***	
	No.	%	No.	%	No.	%
YES	136	75.6	73	40.5	79	43.8
NO	44	24.4	107	59.4	101	56.1
TOTAL	180	100.0	180	100.0	180	100.0

*These figures indicate those respondents who had an off-farm job in 1982 (Question #10) and also had, or did not have, an off-farm job before agricultural land was purchased in 1981 (Question #8).
**These figures indicate those respondents who had an off-farm job in 1982 (Question #10) and also had a spouse who had, or did not have, an off-farm job before agricultural land was purchased in 1981 (Question #9).
***These figures indicate those respondents who had an off-farm job in 1982 (Question #10) and also had a spouse who had, or did not have, an off-farm job in 1982 (Question #11).

had a spouse in 1982. Of these spouses, 31 percent had worked off the farm sometime in 1982 (Table V.7).

Of the 166 individuals who, as well as having an agricultural occupation, also had an off-farm job in 1981 just prior to buying agricultural land, over 82 percent also had an off-farm job in 1982, 47 percent of them had a spouse who had an off-farm job in 1981, and 44 percent of them had a spouse who had an off-farm job in 1982 (Table V.8). Of the 180 individuals who had an agricultural occupation in 1981 and also had an off-farm job in 1982, 75.6 percent had such a job in 1981, just prior to their land purchase; 40.5 percent of them had a spouse who also had an off-farm job in 1981 just prior to the land purchase; and 43.8 percent of them had a spouse who had an off-farm job in 1982 (Table V.9). Information from Statistics Canada indicates that about 41.5 percent of census-farm operators in Alberta in 1981 reported some days of paid off-farm work. This would appear to support the survey results[77].

Over 3 percent more of the respondents and their spouses obtained off-farm jobs in 1982 than had off-farm jobs in 1981 before their land purchase. This increase in off-farm employment may have come about because of the drain on cash flow associated with a land purchase or by difficult economic conditions experienced during the recession which began in 1982 or by some combination of reasons including these two. Brake and Wirth[78], in their study of capital accumulation among Michigan farmers found that generally twice as many operators as their spouses had an off-farm job in 1964. This study, in comparison, found that roughly only a third as many operators as their spouses had an off-farm job. This difference in results may be a reflection of changing social attitudes towards working wives which probably occurred between 1964 and 1981.

Farm Business Structures Among Respondents with an Agricultural Occupation

The division of the types of farm business structures maintained by purchasers with an agricultural occupation are shown in Table V.10. It is difficult to compare these results with those of other studies since the types of businesses discussed vary by study. This study, for example, included joint ventures which are a fairly new type of business

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[77]Statistics Canada, *1981 Census of Canada: Agriculture, Alberta*, p.13-1.
[78]J.R. Brake and M.E. Wirth, *The Michigan Farm Credit Panel: A History of Capital Accumulation*, (Michigan: Michigan State University, Ag. Exp. Sta. Res. Rep. 25, 1964), p. 6.

TABLE V.10: 1981 Alberta Land Survey Frequency Distributions: Farm Business Structure of Agricultural Land Purchasers with an Agricultural Occupation, on December 31, 1981

STRUCTURE	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)
Individual	247	60.2
Partnership	75	18.3
Corporation	50	12.2
Joint Venture	38	9.3
TOTAL	410	100.0

TABLE V.11: 1981 Alberta Land Survey Frequency Distributions: Number of Years the Agricultural Land Purchasers with an Agricultural Occupation, had been Farming

YEARS OF FARMING	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)
0-4 years	114	20.0	29.0
5-9 years	97	24.0	53.0
10-14 years	53	13.0	66.0
15-19 years	47	12.0	78.0
20-29 years	59	15.0	93.0
30 + years	29	7.0	100.0
TOTAL	399	100.0	100.0

structure as was noted in Chapter 3. Statistics Canada groups individuals and unincorporated family operations together (these constituted 86 percent of 1981 Alberta census-farm operators) but differentiates between written agreement and non-written agreement partnerships (which totalled 8.9 percent) and family and non-family legal companies (a total of 4.2 percent)[79]. The greater frequency of corporations, joint ventures, and partnerships among farmer purchasers in the survey may be due, in part, to the comparatively young age of those respondents. That is, many young purchasers may be trying to share the risk of, and the capital resources needed for, farming with someone else to ease their entry into farming.

Years of Farming Among Respondents with an Agricultural Occupation

The distribution of the number of years during which purchasers with an agricultural occupation had been farming is shown in Table V.11. The average number of years they had been farming was 12.4 but the range was from 0 to 54 years. Sixty percent of this group of respondents had been farming 12 years or less. The standard deviation of this variable was relatively high at 10.6 years, indicating that 68 percent of these respondents had been farming for between 2 and 22 years.

The 1980 Farm Credit Survey found that the average number of years farm operators had been self-employed was 24, a figure which was double that suggested by this survey. This difference is likely to be the result of the relatively young age of respondents in this survey compared to the general farming population.

Years During Which Respondents had Owned Agricultural Land

The distribution of the number of years during which the respondents had owned agricultural land is shown in Table V.12. The average number of years during which all of the purchasers had owned land was 9 but the range was between 0 and 54 years. Sixty-six percent of these respondents had owned land for 9 years or less but the standard deviation for this variable was only slightly lower than it was for years of farming, at 10.3 (10 to 19 years).

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[79]Statistics Canada, *1981 Census of Canada: Agriculture, Alberta*, p.13-1.

TABLE V.12: 1981 Alberta Land Survey Frequency Distributions:
Number of Years the Agricultural Land Purchasers had Owned Agricultural Land

YEARS OF OWNING LAND	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)
0–4 years	218	47.0	47.0
5–9 years	89	19.0	66.0
10–14 years	42	9.0	75.0
15–19 years	52	11.0	86.0
20–29 years	40	9.0	95.0
30 + years	25	5.0	100.0
TOTAL	482	100.0	100.0

The difference of three years between the average number of years of farming and the average number of years as a land owner is not surprising. The results for "years as an agricultural land owner" include purchasers with and without an agricultural occupation while "years of farming" includes only purchasers with an agricultural occupation. Purchasers without an agricultural occupation may be less likely to own land for as long a period of time as purchasers with an agricultural occupation. They may be more likely to purchase agricultural land for speculative purposes which implies that they would hold land for shorter periods of time. Their inclusion may, therefore, have had a depressing effect on the number of years during which respondents had owned land. Many farmers may also have started farming some time before they actually bought land.

Acreage in the Parcel Purchased by Respondents

Respondents purchased an average of 437 acres in the first parcel they purchased in 1981 but the average number of cultivated acres purchased was 306.8. Responses to both variables tended to be concentrated in quarter-section "bunches" of 160, 320, 480, and 640 acres. "Total acres" covered a range from 60 acres to 5,400 acres, with a standard deviation of 531 acres, and "cultivated acres" covered a range of 0 acres to 4,000 acres, with a standard deviation of 399 acres. It should be noted that the concentration of acres in 160 acre bunches is not unusual given the functioning of the Alberta Land Titles system as described in Chapter Four. The frequency distributions of "total acres" and "cultivated acres" are given in Tables V.13 and V.14.

Market Value of the Parcel Purchased by Respondents

Of the 482 purchasers in the survey, 454 responded to this question. The distribution of the responses is given in Table V.15. The average market value of land purchased by respondents of the survey was $682.00.

Alberta Agriculture produces an annual publication on agricultural real estate values in Alberta. The real estate values in this publication, *1981 Agricultural Real Estate Values in Alberta*, are based on the assurance fund values reported for rural land transfers registered at the Land Titles Offices in Alberta. It has been said that the real estate values

TABLE V.13: 1981 Alberta Land Survey Frequency Distributions: Total Number of Acres in the First Parcel of Agricultural Land Purchased in Alberta in 1981 by the Agricultural Land Purchasers

TOTAL ACREAGE PURCHASED	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)
160 acres and less	187	40.0	40.0
161–320 acres	125	26.0	66.0
321–480 acres	51	11.0	77.0
481–640 acres	38	8.0	85.0
641–1000 acres	38	8.0	93.0
1001 and over acres	33	7.0	100.0
TOTAL	472	100.0	100.0

TABLE V.14: 1981 Alberta Land Survey Frequency Distributions: Total Number of Cultivated Acres in the First Parcel of Agricultural Land Purchased in Alberta in 1981 by the Agricultural Land Purchasers

CULTIVATED ACREAGE PURCHASED	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)
160 acres and less	233	49.0	49.0
161–320 acres	118	26.0	75.0
321–480 acres	45	9.0	84.0
481–640 acres	33	7.0	91.0
641–1000 acres	21	5.0	96.0
1001 and over acres	21	4.0	100.0
TOTAL	472	100.0	100.0

TABLE V.15: 1981 Alberta Land Survey Frequency Distributions: 1981 Market Value Per Acre of the First Parcel of Agricultural Land Purchased in Alberta in 1981 by the Agricultural Land Purchasers

DOLLARS PER ACRE	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)
$300 and less	91	20.0	20.0
$301–$400	90	20.0	40.0
$401–$600	88	19.0	59.0
$601–$800	64	14.0	73.0
$801–$1000	58	9.0	86.0
$1001–$1500	40	9.0	95.0
$1501 and over	23	5.0	100.0
TOTAL	454	100.0	100.0

in the report represent opinions of value in real estate transfer and primarily represent proxies for average market values[80]. This source gives the average value of agricultural real estate in Alberta in 1981 as $443.95. This figure was calculated by dividing the total value of land transferred in 1981 by the total number of acres of land transferred in 1981[81]. The difference between this and the average value calculated from respondents to the survey was $238 per acre. Alberta Agriculture's yearly calculations, while including only those transfers of over 60 acres, also eliminated those transfers having an assurance fund value of less than $5 or more than $1,500 per acres. If this value restriction is applied to the 1981 Alberta Land Survey market value results, the average market value cited by respondents to this study drops to $567 per acre, a value which is still $123 higher than the Alberta Agriculture publication result.

Alberta Agriculture published a report in 1982 of a study completed on 1980 agricultural real estate values. The primary objective of that study was to determine the extent to which agricultural real estate values are understated in relation to the opinions of local assessors in selected municipalities[82]. That report found that agricultural real estate values based on assurance fund values as indicated in the annual land value publication, were about 21 percent lower than the opinions of value of local municipal assessors[83]. The report suggests that this understatement of value has probably been fairly constant from year to year. If 21 percent is added to the 1981 Alberta average agricultural land value of $443.95, then the average value increases to $537.24, or a figure only $30 lower than the average market value found in this survey.

Statistics Canada information on the total value of land and buildings on Alberta farms in 1981 and the total area of farms in Alberta in 1981 suggests that an average value per acre of farmland was $634.50[84]. This figure was about $47 lower than the average market value of land purchased by respondents to this study.

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[80]Melville D. Miller, *1981 Agricultural Real Estate Values in Alberta*, (Edmonton, Alberta: Alberta Agriculture, Resource Economics Branch, 1981), p. 6.
[81]Ibid. p. 29.
[82]Melville D. Miller, *Agricultural Real Estate Value Check*, (Edmonton, Alberta, Alberta Agricultural, Resources Economics Branch, 1982), p. 4.
[83]Ibid. p. 24.
[84]Statistics Canada, *1981 Census of Canada: Agriculture, Alberta*, pp. 12-1 and 23-1.

Canada Land Inventory Classification of the Parcel Purchased by Respondents

The frequency distribution for the CLI classification of the parcel purchased by respondents is shown in Table V.16. The large number of "unknown" responses to this variable might suggest that large numbers of individuals do not consider knowing the CLI classification of the land they purchase to be of major importance. The annual Agricultural Real Estate Values publication[85] provides figures on the average value of land transferred in each CLI classification in Alberta. When the average market value of the different CLI classes of purchased agricultural land from this survey are compared to the average assurrance fund value provided by CLI classification in the Alberta Agriculture publication for 1981, large differences appear. For land in CLI classes 1, 2, and 3 the average values given by respondents to the land survey is about $100 higher than the values given by the Alberta Agriculture publication[86]. For land in CLI classes 4, 5, and 6 the average value from the land survey is much lower than the value given in the publication. This comparison suggests that the assurance fund values for agricultural real estate that are used in the Alberta Agriculture publication have a tendency to be undervalued for better quality land and overvalued for poorer quality land.

Distance to City from the Parcel Purchased by Respondents

The average distance from the parcels purchased by the respondents to the nearest city was 72 miles. The standard deviation of the distance variable around the mean was 58 miles. The least distance was one mile; the greatest distance was 500 miles between the parcel and the nearest city. Concentration was generally in 5 and 10 mile groups (ie. 20, 25, and 30 miles). This is probably due to rounding on the part of respondents. The frequency distribution for this variable is given in Table V.17.

Location of Parcel Purchased by Respondents

The location of the agricultural land purchases made by respondents are presented, according to municipality of purchase, on Figure V.1 for ease of observation. The map does not indicate many marked differences in the percentages of purchases which

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[85]Melville D. Miller, *1981 Agricultural Real Estate Values in Alberta*, (Edmonton, Alberta: Alberta Agriculture, Resource Economics Branch, 1982), p.14.
[86] Ibid. p. 30.

TABLE V.16: 1981 Alberta Land Survey:
Major Canada Land Inventory Classification Frequency Distributions and Comparative Average Market Values of the First Parcel of Agricultural Land Purchased in Alberta in 1981 by the Agricultural Land Purchasers

CLI CLASS:	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)	SURVEY AVERAGE MARKET VALUE ($)		ALBERTA AVERAGE VALUE ($)	
				Unadjusted	Adjusted*	Unadjusted**	Adjusted***
1	10	2.3	2.4	1566.2	1049.3	779.3	943.0
2	72	16.8	19.2	822.1	722.1	529.4	640.6
3	67	15.7	34.8	633.0	619.7	444.4	537.7
4	21	4.9	39.7	570.3	414.5	370.8	448.7
5	4	0.9	40.7	245.2	145.3	393.1	475.6
6	1	0.2	40.9	310.0	310.0	349.1	422.4
8, Unknown	253	59.1	100.0	N/A	N/A	N/A	N/A
TOTAL	428	100.0	100.0				

*These figures were calculated after all parcels of land having a market value of less than $5 or more than $1,500 were removed from the survey results. Please see text on market value of land for an explanation.
**Source: Melville D. Miller, *1981 Agricultural Real Estate Values in Alberta*, (Edmonton, Alberta: Alberta Agriculture, Resource Economics Branch, 1982), p. 30.
***These figures were increased from Melville D. Miller, *1981 Agricultural Real Estate Values in Alberta*, (Edmonton, Alberta: Alberta Agriculture, Resource Economics Branch, 1982), p. 30. by 21 percent. Please see text on market value of land for an explanation.

TABLE V.17: 1981 Alberta Land Survey Frequency Distributions: Distance to the Nearest City (Population 10,000 and over) of the First Parcel of Agricultural Land Purchased in Alberta in 1981 by the Agricultural Land Purchasers

DISTANCE	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)
25 miles and less	73	15.0	15.0
26–50 miles	133	29.0	44.0
51–75 miles	110	23.0	67.0
76–100 miles	79	17.0	84.0
101–150 miles	50	10.0	94.0
151 miles and over	27	6.0	100.0
TOTAL	472	100.0	100.0

TABLE V.18: 1981 Alberta Land Survey Frequency Distributions: Ownership in 1981 of the First Parcel of Agricultural Land Purchased in Alberta in 1981 by the Agricultural Land Purchasers

OWNERSHIP	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)
Individual	281	59.2
Family Partnership	130	27.4
Non–Family Partnership	9	1.9
Family Corporation	47	9.0
Non–Family Corporation	8	1.7
TOTAL	475	100.0

FIGURE V.1: 1981 Alberta Land Survey: Absolute and Relative Frequency Distributions by Location of Purchases of Agricultural Land in Alberta in 1981 by Agricultural Land Purchasers.

occurred in each municipality. Only County 22 and Improvement District 17 seem to show an appreciable difference, in terms of the number of purchases, from the rest of the province. The location of the agricultural land purchases may be useful in determining whether the "ripple effect" occurred among the survey respondents.

Ownership of Parcel Purchased by Respondents

The frequency distribution for this variable is given in Table V.18. These results are very similar to the responses for farm business structure. Corporation ownership and business structure appear to be almost equally popular but partnership ownership appears to be more frequent than partnership business structure.

Reasons Given by Respondents for Purchasing Agricultural Land

Most of the respondents indicated that they had more than one very important reason for purchasing land in 1981. Table V.19 gives the frequency distribution for the rankings of the reasons which respondents gave for purchasing agricultural land. The most popular reasons given for purchasing property in 1981 by the respondents were "expand existing farm operation", "establish own farm", and "closeness to other property". "Help child enter into farming" and "investment" were slightly less popular answers. Many respondents (81.6 percent) indicated that they also had "other" very important or important reasons for purchasing land and spelt these out. These "other" reasons varied from personal reasons to economic reasons. Some wanted to be on their own, to start a new, better quality of life, or to ensure a future for themselves and their children. Others were buying property because it had been in the family for many years, their father was retiring and the opportunity was there to purchase at a reduced price, or they wished to expand in cooperation with the family farm. Still others purchased property because they wanted or needed to expand their operations for very specific reasons such as grain storage, a source of hay and pasture, or a larger herd.

While the above descriptions of reasons for purchasing land provided some information on respondents' purchasing motives, there is very little information to indicate how the various rankings of the reasons compared. The high percentage of respondents indicating that they had "other" important reasons for purchasing land seems to express

**TABLE V.19: 1981 Alberta Land Survey Frequency Distributions:
Importance of Reasons for Purchasing the First Parcel of Agricultural Land Purchased
in Alberta in 1981 Cited by the Agricultural Land Purchasers**

RESPONDENTS RANKINGS OF PURCHASING REASONS

REASON FOR PURCHASE	VERY UNIMPORTANT (%)	UNIMPORTANT (%)	NEUTRAL (%)	IMPORTANT (%)	VERY IMPORTANT (%)	TOTAL PERCENTAGE
Expand farm	16.7	4.1	13.6	23.8	41.7	100.0
Increase farm income	13.0	7.0	15.5	23.9	40.6	100.0
Spread fixed costs	20.8	13.4	24.5	19.6	21.8	100.0
Use machinery	22.3	12.7	22.3	24.8	17.9	100.0
Use labor	28.3	15.3	25.9	17.0	13.5	100.0
Child entering farming	36.2	11.2	18.6	15.6	18.4	100.0
Establish own farm	15.0	6.2	12.6	14.7	51.5	100.0
Second homd	59.5	11.9	16.4	6.0	6.2	100.0
Recreation	72.8	10.2	10.7	4.3	2.0	100.0
Non-ag development	81.0	6.9	7.9	1.8	2.5	100.0
Investment	25.0	5.0	25.7	27.6	16.7	100.0
Inflation hedge	32.8	10.5	26.2	20.1	10.3	100.0
Capital gains	50.5	7.0	23.5	10.9	8.0	100.0
Tax deferral rollover	63.1	9.0	14.4	6.4	7.1	100.0
Move operation	65.3	9.4	12.6	4.9	7.9	100.0
Move from city/town	59.3	7.4	12.6	8.6	12.1	100.0
No rental land	45.9	12.7	19.2	12.0	10.2	100.0
Close to property	30.5	6.8	12.7	19.0	31.0	100.0
Close to residence	36.0	7.8	16.9	17.4	21.9	100.0
Good price	9.9	10.2	26.9	24.9	28.1	100.0
Other	1.3	11.8	5.3	10.5	71.1	100.0

*These percentages can be interpreted in the following way: 16.7% of the respondents indicated that they felt Reason 1 was a very unimportant reason for them to purchase agricultural land in 1981.

the importance of the purchasers' individual reasons for purchasing. The important reasons for purchasing land coincide with those identified by the literature and a priori information as likely to be of importance.

Acreage Owned, Rented and Purchased by Respondents

The respondents owned 585 acres of agricultural land, on average, before they made their land purchase in 1981. However, the standard deviation around this average was 1,127.7 acres and it is important to note that 35 percent of the purchasers did not own any land before their 1981 purchase. The average number of acres owned by respondents after the 1981 purchase was 937.3, a full 352 acres more than was owned before the purchase. The standard deviation of 1,355.7 acres around the mean number of acres owned after the purchase, however, indicates the diversity of this variable. The distributions of the acres owned before and after the 1981 purchases by the respondents are shown in Tables V.20 and V.21. The results are fairly consistent with the average size of parcel purchased of 437 acres. The average size of census farms in Alberta in 1981 was 813.3 acres. The difference in average size is probably due to differences in respondents to the census (restriction by amount of sales) and the survey (restriction by acreage)[17].

If the distribution of 1981 Alberta census farms by acreage is compared to the same distribution of the survey respondents by acreage owned following the 1981 purchases, as is shown in Table V.22, it appears that the two groups are fairly consistent except in the acreage category of 0 to 70 acres. The difference in this category between the two groups is probably due almost entirely to the exclusion of parcels of 60 acres or less from the sample. Most of the remaining categories for the two groups differed by less than 2 percentage points.

The respondents rented an average of 338.0 acres of land before they made their land purchase in 1981. Again there is wide diversity in responses to this variable. The standard deviation around the mean was 695.8 acres. Fifty percent of the purchasers indicated that they did not rent any land before they made their purchase. On average, 360.5 acres of land were rented by the respondents after their purchase in 1981, but 48

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[17]Statistics Canada, 1981 Census of Canada: Agriculture, Alberta, p. 13-1.

TABLE V.20: 1981 Alberta Land Survey Frequency Distributions: Number of Acres Owned Before the First Purchase of Agricultural Land in Alberta in 1981 by the Agricultural Land Purchasers

ACREAGE OWNED BEFORE PURCHASE	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)
0 acres	155	35.0	35.0
1-160 acres	75	17.0	52.0
161-320 acres	54	13.0	65.0
321-480 acres	25	5.0	70.0
481-640 acres	28	7.0	77.0
641-1000 acres	33	7.0	84.0
1001-1500 acres	20	5.0	89.0
1501 + acres	50	11.0	100.0
TOTAL	440	100.0	100.0

TABLE V.21: 1981 Alberta Land Survey Frequency Distributions: Number of Acres Owned Following the First Purchase of Agricultural Land in Alberta in 1981 by the Agricultural Land Purchasers

ACREAGE OWNED AFTER PURCHASE	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)
0-160 acres	77	17.0	17.0
161-320 acres	92	21.0	38.0
321-480 acres	54	12.0	50.0
481-640 acres	56	13.0	63.0
641-1000 acres	53	12.0	75.0
1001-1500 acres	53	12.0	87.0
1501 and over acres	60	13.0	100.0
TOTAL	445	100.0	100.0

TABLE V.22: 1981 Alberta Land Survey Frequency Distributions: Number of Acres Owned Following the First Purchase of Agricultural Land in Alberta In 1981 in Comparison with Statistics Canada 1981 Information

ACREAGE OWNED FOLLOWING PURCHASE*	AGREAGE DISTRIBUTION OF STATISTICS CANADA 1981 ALBERTA CENSUS FARM OPERATORS** (%)	AGREAGE DISTRIBUTION OF THE SURVEY RESPONDENTS (%)
0–70 acres	7.3	1.0
70–239 acres	21.4	19.0
240–399 acres	16.2	20.0
400–559 acres	11.8	11.0
560–759 acres	11.0	14.0
760–1119 acres	13.1	11.0
1120–1599 acres	8.6	11.0
1600–2239 acres	5.0	3.0
2240–2879 acres	2.1	5.0
2880 + acres	3.6	5.0
TOTAL	100.0	100.0

*Acreage categories are those used by Statistics Canada

**Statistics Canada, *1981 Census of Canada: Agriculture, Alberta,* (Ottawa: Statistics Canada, 1981), p. 13–1.

TABLE V.23: 1981 Alberta Land Survey Frequency Distributions: Number of Acres Rented Before the First Purchase of Agricultural Land in Alberta in 1981 by the Agricultural Land Purchasers

ACREAGE RENTED BEFORE PURCHASE	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)
0 acres	205	48.0	48.0
1–160 acres	53	12.0	60.0
161–320 acres	50	12.0	72.0
321–480 acres	32	8.0	80.0
481–640 acres	20	4.0	84.0
641–1000 acres	28	7.0	91.0
1001–1500 acres	15	3.0	94.0
1501 + acres	24	6.0	100.0
TOTAL	427	100.0	100.0

TABLE V.24: 1981 Alberta Land Survey Frequency Distributions: Number of Acres Rented Following the First Purchase of Agricultural Land in Alberta in 1981 by the Agricultural Land Purchasers

ACREAGE RENTED FOLLOWING PURCHASE	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)
0 acres	213	50.0	50.0
1–160 acres	61	14.0	64.0
161–320 acres	47	11.0	75.0
321–480 acres	21	5.0	80.0
481–640 acres	21	5.0	85.0
641–1000 acres	27	6.0	91.0
1001–1500 acres	17	4.0	95.0
1501 + acres	20	5.0	100.0
TOTAL	427	100.0	100.0

TABLE V.25: 1981 Alberta Land Survey Frequency Distributions: Total Number of Acres of Agricultural Land Purchased in Alberta in 1981 by the Agricultural Land Purchasers

TOTAL ACREAGE PURCHASED	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)
0–160 acres	167	36.0	36.0
161–320 acres	127	27.0	63.0
321–480 acres	57	13.0	76.0
481–640 acres	39	8.0	84.0
641–1000 acres	38	8.0	92.0
1001–1500 acres	16	4.0	96.0
1501 + acres	20	4.0	100.0
TOTAL	463	100.0	100.0

percent of the purchasers did not rent any land at all. The standard deviation around the mean of this variable was 681.9 acres. The distributions of the acres rented before and after the 1981 purchases by the respondents are shown in Table V.23 and V.24. Only 22.2 percent of the respondents indicated that they had ever rented the land they purchased in 1981.

An average of 461.6 acres were purchased in total in 1981 by respondents and the standard deviation around this average was 553.1 acres. The distribution of the total acres of land purchased in 1981 is shown in Table V.25. The difference between average total acres purchased in 1981 and the average number of acres in the first parcel purchased in 1981 is only 24.2 acres, a feature which suggests that most respondents either made all of their 1981 land purchases in a single transaction or else had a tendency to "lump" all of their purchases together in their response. Unfortunately, further analysis of this issue is not possible.

The owned, rented and purchased acreage responses provided by the agricultural land purchasers were usually in multiples of 160 acres, a feature which coincides with the results found for parcel acreages in Tables V.13 and V.14.

Acreage Sold by Respondents Between January 1, 1980 and Time of Purchase in 1981

The frequency distribution for the number of acres sold by respondents is shown in Table V.26. Seventy-nine percent of the respondents did not sell any land between January 1, 1980 and the time of their 1981 purchase. The average number of acres sold by those who did sell land was 625.4. The majority of sales were in quarter-section parcels. The distribution of sales, given by municipality, are shown in Figure V.2. The frequency distributions of the rankings of the reasons given by the respondents for selling agricultural land are given in Table V.27. Over 48 percent of the sales were for some "other" important or very important reason. Those "other" reasons which were stated most often were selling "to buy more suitable land", "to buy dry land", and "to buy closer property".

Some of the current literature, as discussed in Chapter Two, on the topic of agricultural land sales suggests that "estate settlement" and "financial problems" are the main reasons for selling land. The results of the survey, however, do not coincide with

TABLE V.26: 1981 Alberta Land Survey Frequency Distributions: Total Number of Acres of Agricultural Land Sold in Alberta Between January 1, 1980 and the Time of the First Purchase of Agricultural Land in Alberta in 1981 by the Agricultural Land Purchasers

TOTAL ACREAGE SOLD	ABSOLUTE FREQUENCY (No.)	RELATIVE FREQUENCY (%)	CUMULATIVE FREQUENCY (%)
0 acres	368	79.0	79.0
1–160 acres	35	8.0	87.0
161–320 acres	24	5.0	92.0
321–640 acres	13	3.0	95.0
641–960 acres	9	2.0	97.0
961 + acres	15	3.0	100.0
TOTAL	464	100.0	100.0

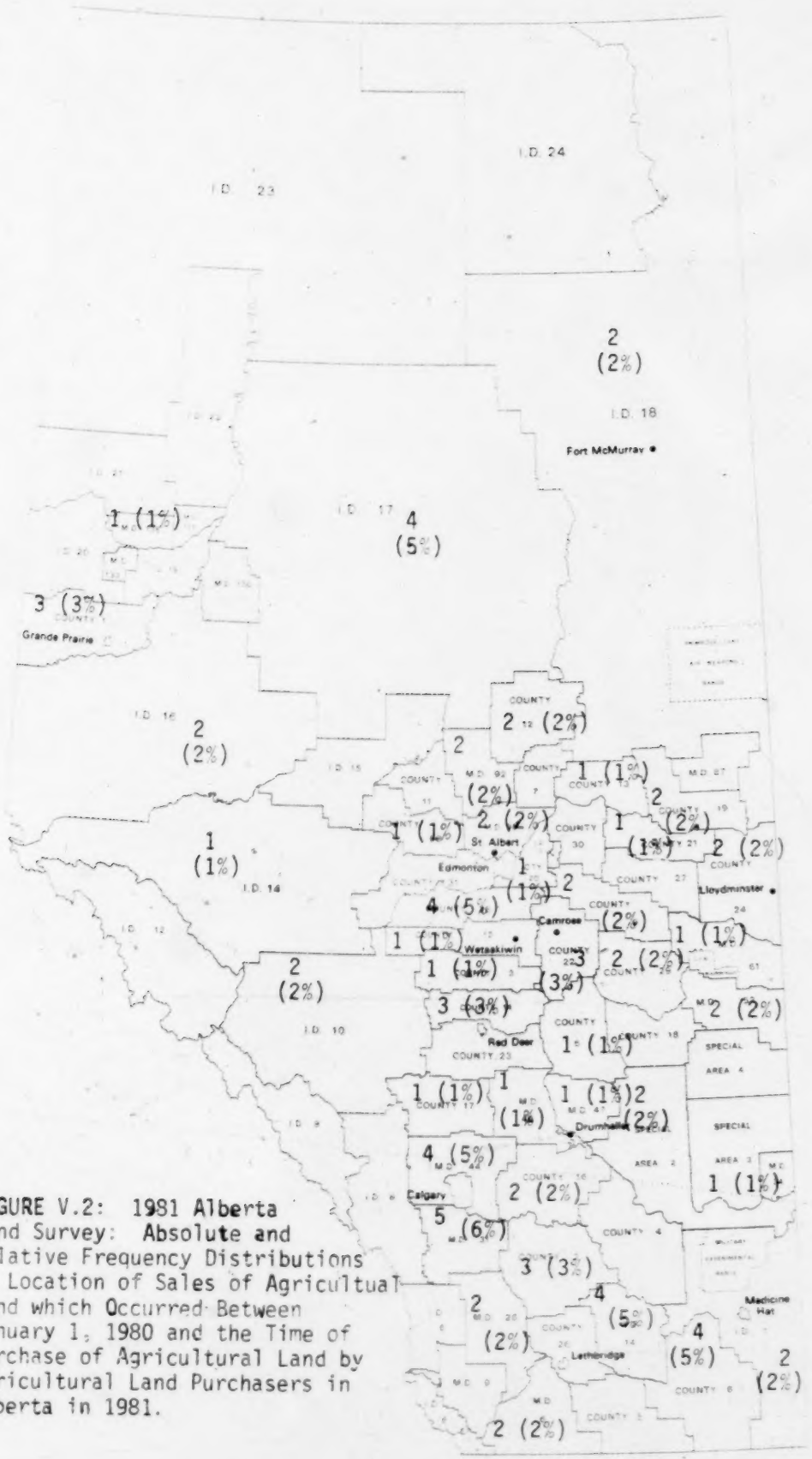

FIGURE V.2: 1981 Alberta Land Survey: Absolute and Relative Frequency Distributions by Location of Sales of Agricultual Land which Occurred Between January 1, 1980 and the Time of Purchase of Agricultural Land by Agricultural Land Purchasers in Alberta in 1981.

TABLE V.27: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Selling Agricultural Land in Alberta in 1980-81 to the Agricultural Land Purchasers Who Sold Land During that Time

RESPONDENTS RANKINGS OF SELLING REASONS

REASON FOR SELLING	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	(%)	(%)	(%)	(%)	(%)	%
Property expropriated	88.7	1.6	6.5	1.6	1.6	100.0
Financial problems	78.5	1.5	7.7	3.1	9.2	100.0
Urban expansion	54.5	6.1	15.2	7.6	16.7	100.0
Speculation	23.6	2.8	8.3	20.8	44.4	100.0
Capital gains	85.5	4.8	8.1	0.0	1.6	100.0
Farm too large	56.7	6.0	9.0	10.4	17.9	100.0
Moving operation	62.1	4.5	16.7	9.1	7.6	100.0
Changing operation	83.1	4.6	10.8	1.5	0.0	100.0
Another job	38.0	1.4	7.0	25.4	28.2	100.0
Retirement or health	82.1	6.0	7.5	1.5	3.0	100.0
Other reasons	37.9	0.0	10.3	3.4	48.3	100.0

*These percentages can be interpreted in the following way: 88.7 percent of the respondents who sold land between January 1, 1980 and the time of their purchase said that Reason 1 was a very unimportant reason for them to sell land.

these reasons. The survey respondents gave "moving farm operation" and "changing farm operation" most often as very important reasons for selling land. The difference in responses in the literature and this survey is probably due to differences in definitions. The literature refers to sales of land alone and not necessarily to sales with subsequent purchases.

The survey results noted above for reasons for selling agricultural land are not inconsistent with the possibility that the "ripple effect" may have been of some consequence in some respondents' decisions to sell and buy agricultural land. The information from the survey on the location of sales and subsequent purchases and the information on purchasers' reasons for sale and purchase may aid in determining the existence of the "ripple effect" in the Alberta farmland market. This topic is explained in further detail in Chapter Six.

Use in 1982 of the Land Purchased by Respondents

Eighty-three percent of the respondents to the survey farmed their property themselves in 1982, 9 percent rented it out for someone else to farm, and about 3 percent hired someone else to farm it for them. Only 0.8 percent of the 482 respondents held their property idle. These figures are consistent with responses respondents gave for their occupation. Since 88.8 percent of the purchasers were farmers it appears reasonable that close to the same percentage should be farming their own land.

Financing of the Agricultural Land Purchase

For all types of financing a clear pattern of "all or none" emerged. That is, many respondents seemed to get all of their financing from one source rather than from several sources. The frequency distributions for the types of financing are shown in Table V.28. "Other" types of financing mentioned were limited to Small Business Development Bonds which were introduced by the Federal Government in 1980. The first column of Table V.28 shows the percentage of financing received from each source on average. While these types of financing will be examined more closely in Chapter Six the division between them should be noted here. Financing by FCC, FBDB, the seller, family members and other sources appear to be far less extensive than financing by AADC, the banks, and a

TABLE V.28: 1981 Alberta Land Survey Frequency Distributions: Percentages of Financing Received From the Eight Sources of Financing, Towards the First Parcel of Agricultural Land Purchased in Alberta in 1981 by the Agricultural Land Purchasers

TYPE OF FINANCING	AVERAGE FUNDING FROM SOURCE	NO FUNDING FROM SOURCE		SOME FUNDING FROM SOURCE		ALL FUNDING FROM SOURCE	
	%	No.	%	No.	%	No.	%
Own funds	26.6	190	46.0	171	54.0	54	13.0
Banks etc.	24.0	273	66.0	100	34.0	42	10.0
AADC	29.1	281	68.0	50	32.0	84	20.0
FCC	7.7	363	87.0	32	13.0	20	5.0
FBDB	.22	413	99.5	2	0.5	0	0.0
Seller	6.3	371	89.0	37	11.0	7	2.0
Family	4.3	379	91.0	27	9.0	9	2.0
Other	1.7	406	97.8	5	1.2	4	1.0

purchaser's own funds. The concessional terms and thus the popularity, of AADC's beginning farmer loan program may be responsible for this.

According to AADC's annual report for 1980-1981, during the year ending 31 March 1981, AADC lent $179 million to farmers under the two direct loan programs it offered. The report states that, during the year, loans under the Beginning Farmer Program totalling $145 million assisted more than 1,000 persons to take up farming. The purpose of the program is to make it easier for the beginning farmer to establish a viable farm unit through the acquisition of land or other farm assets. In 1979-80, loans under this program had totalled only $28.8 million for 277 loans. The increased lending in 1980-81 occurred as a result of a program change from "lender of last resort" to "lender of first resort"[11]. After the change, AADC found itself providing 80 to 85 percent of its total loans to beginning farmers. Loans to beginning farmers now comprise about 70 percent of AADC's portfolio[12]. The number of younger respondents to the survey may have influenced the survey results as well.

Of those individuals who obtained financing from FCC, AADC, or FBDB, 46 percent indicated they would still have purchased the property had they not qualified for loans under these agencies. Fifty-four percent of these respondents indicated that they would not have purchased the property without the assistance of these agencies. Over one third of the respondents to the survey indicated that they had not applied to any of these agencies.

Factors Stated by Respondents to be Significant in the 1981 Purchase Price of Their Property

Approximately one half of the respondents stated some factors they felt significantly affected the price of the land they bought in 1981. A large number of respondents stated that they felt that foreigners and Hutterite colonies influenced the price they paid for their land. Other popular factors felt to have existed and to have had an upward effect on land prices included speculators, developers, inflation, the "ripple effect", location in terms of better roads, closeness to other property owned or rented,

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[11] John Lilley, *An Analysis of Legislation Affecting Agricultural Land in Alberta*, (Edmonton, Alberta: Environment Council of Alberta, 1982), p. 3.
[12] "Young Farmers in Bind", *The Edmonton Journal*, 30 May 1983.

closeness to urban centers, and the feature that there is a small amount of land available for sale in relation to the demand to buy it. Less often suggested reasons for higher land prices included closeness to recreational sites, the availability of a building site, the ability to subdivide, pressure from prospective buyers, and finally, the quality of the land. Where purchasers felt land prices were favorable or relatively low, the following factors were often given as reasons: the financial problems experienced by the vendor, previous rental of the land combined with knowing the owner, and the purchasing of larger parcels.

Additional Comments

Approximately 25 percent of the respondents to the survey provided some additional comments on the status of the agricultural land market in Alberta. Respondents to this portion of the survey stated, almost without exception, that there are inconsistencies between the prices being paid for, and the cost associated with, agricultural land and the prices of the products which are produced on agricultural land. In particular, cash flow problems experienced by farmers were mentioned many times and, in this respect, the ability of high interest costs to adversely affect growth was felt to be a major problem. Many respondents felt that beginning farmers cannot compete in an agricultural land market that is experiencing rapid growth. Many respondents stated that they felt that there was difficulty in qualifying for loans from AADC and FCC.

It is important to note at this point that the last two responses in the questionnaire were to open-ended questions and multiple answers were expected and desired. The nature of these questions did not allow for coding so a manual system for recording answers was employed. What is mentioned above is a summary of the responses provided by all of the purchasers. Respondents noted factors they believed influenced the price of their own property more often than they offered information on the general agricultural land market. In this regard, they seemed to perceive problems specific to their own purchase more readily than they saw general problems in the market. Many of the factors mentioned or comments made here were discussed in the preceding portions of this chapter. Many of the respondents acknowledged their awareness of the problems and issues this study has attempted to deal with.

VI. ANALYSIS OF THE RESULTS OF THE SURVEY

A. Interpreting the Results

Most of the analyses which follow incorporate two statistical and two descriptive aids. The Mann-Whitney U test is a powerful nonparametric test which is designed to determine whether or not two samples were drawn from the same population. The null hypothesis is that the two populations are identical and the alternative is that they are not the same.

The first step in the Mann-Whitney U-test is to consider all the scores representing the two samples as a single set of observations, and to rank this entire group from the lowest to the highest score. If the null hypothesis that the two samples were drawn from the same population is true, then the observations from the two samples will be fairly well scattered throughout this ranking of both groups. If the two samples do not come from identical populations, then the observations of one sample will tend to be bunched together, either at the low end of the rankings or at the high end of the rankings. Such patterns can be detected by calculating a value of U, which is the statistic for the Mann-Whitney test. The statistic U for the Mann-Whitney test is calculated by counting the number of times the scores from one sample precede each score in the other sample. If the count is quite large or quite small relative to the value expected under the null hypothesis, then the two samples may not be randomly interspersed, but one set of observations may have come from a different population than the other[90]. The Mann-Whitney U-test can only be used on data that are at least ordinal in measurement[91].

The Mann-Whitney U test results which are presented in the following analyses are done so in the form of levels of significance. These levels are compared with the acceptable significance level of .05 which was adopted as acceptable for this study. If the calculated significance level is equal to or less than .05, the null hypothesis that the two populations are the same is rejected. The variables marked with an asterisk (*) in the tables

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[90] Donald L. Harnett, *Introduction to Statistical Methods*, 2nd edition (Reading, Massachusetts: Addison-Wesley Publishing Company, 1975), p. 522.

[91] There are four general types of quantitative measurement. Nominal scales have no order, distance or origin (eg. types of ice cream). Ordinal scales have order but there is no indication of the distance between values and there is no unique origin (eg. Likert scales). Interval scales have order and distance but they have no unique origin (eg. temperature guages). Ratio scales have order, distance and a unique origin (eg. age in years).

are significantly different in the two populations being compared.

Mean values for each variable for each group being studied were also calculated. They are reported, together with the Mann-Whitney U test results, in the tables in this chapter. These mean values were not used to calculate the U tests but they do help to interpret the results of the tests. The mean values for the reasons given for purchase and sale are difficult to interpret since these variables were rated on a Likert scale and are ordinal in measurement. These figures, however, may aid in interpretation of the U test results. Frequency distributions of variables measured in nominal units are also presented for each group of agricultural land purchasers examined. Appendix B presents the frequency distributions for the reasons for purchase and sale for each group. Appendix C presents the standard deviations for each variable in each group. These standard deviations allow for greater interpretation of the mean values and Mann-Whitney U test results for each variable studied.

B. Detailed Analysis of Age of Respondents

The ages of the respondents seemed to be a strong influence in the results of many of the frequency distributions presented in Chapter V and for this reason a more detailed analysis of this variable was completed. The following discussion centers around two main age groups. The average age of all of the respondents was used as the dividing point for the two groups because of its statistical significance and because it seemed to naturally divide the younger and older purchasers. The younger age group is composed of purchasers 36 years of age and younger and the older group is composed of purchasers 37 years of age and older. The average age of the younger purchasers was 27.8 years and the average age of the older purchasers was 47.8 years. The average age of the older individuals corresponds closely to the 1981 census-farm operators' average age of 46 years.

The results of the Mann-Whitney U test to determine if there were any significantly different variables between the two age groups is shown in Table VI.1. This table also includes the means of the variables for each age group. Selected frequency distributions for the two groups are shown in Table VI.2.

TABLE VI.1: 1981 Alberta Land Survey
Analysis of Two Agricultural Land Purchaser Age Groups: Mann-Whitney U Test Results and Age Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: YOUNGER GROUP**	MEAN VALUE: OLDER GROUP***
Age	.0000*	27.8	47.8
Education	.0001*	12.7	11.8
Years of farming	.0000*	6.6	19.8
Years as land owner	.0000*	3.2	15.9
Parcel–total acreage	.3276	402.6	456.0
Parcel–cultivated acreage	.1480	291.8	305.0
Parcel–market value	.1325	624.7	745.2
Parcel–distance to city	.0783	73.4	69.9
Reasons For Purchase:			
Expand farm	.6304	2.7	3.7
Increase farm income	.5077	3.8	3.6
Spread fixed costs	.4657	3.0	3.2
Use machinery	.1014	2.9	3.2
Use labor	.1015	2.6	2.9
Child entering farming	.0000*	2.2	3.1
Establish own farm	.0000*	4.3	3.2
Second home	.0639	1.8	2.1
Recreation	.0581	1.4	1.6
Nonagricultural development	.0289*	1.3	1.5
Investment	.4824	3.0	3.1
Inflation hedge	.0077*	2.5	2.9
Capital gains	.0846	2.1	2.3
Tax deferral rollover	.0108*	1.7	2.1
Move farm operation	.1748	1.7	1.9
Move from city/town	.7525	2.1	2.0
No rental land	.4498	2.3	2.2
Close to property	.1414	3.1	3.2
Close to residence	.5007	2.9	2.7
Good price	.0016*	3.7	3.3
Other reasons	.9326	4.2	4.3

TABLE VI.1 CONTINUED: 1981 Alberta Land Survey
Analysis of Two Agricultural Land Purchaser Age Groups: Mann-Whitney U Test Results and Age Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: YOUNGER GROUP	MEAN VALUE: OLDER GROUP
Prior acres owned	.0000*	258.2	975.2
Following acres owned	.0000*	611.5	1334.6
Prior acres rented	.0416*	369.5	303.0
Following acres rented	.0012*	402.6	305.6
Total acres purchased 1981	.2056	427.7	460.1
Total acres sold	.0000*	66.6	211.23
Reasons for Sale:			
Property expropriated	.0997	1.1	1.4
Urban expansion	.0155*	1.2	2.0
Capital gains	.6386	2.1	2.4
Move farm operation	.5958	3.5	3.7
Another job	.5480	1.3	1.3
Financial problems	.6738	2.2	2.4
Speculation	.9624	1.9	1.9
Farm too large	.7036	1.3	1.4
Changing farm operation	.6865	3.1	2.9
Retirement, health	.5135	1.2	1.5
Other reasons	.5648	3.4	3.0
Financing Sources:			
Own funds	.0000*	14.2	42.0
Banks etc.	.0001*	16.4	30.2
AADC	.0000*	48.1	6.0
FCC	.3174	8.8	6.5
FBDB	.8794	1.8	0.3
Seller	.3110	5.6	7.1
Family	.4767	4.6	3.0
Other Sources	.0008*	0.0	3.89

*Denotes statistically significant at .05.
**Younger Group: Respondents were 36 years of age and younger
***Older Group: Respondents were 37 years of age and older

TABLE VI.2: 1981 Alberta Land Survey
Analysis of Two Agricultural Land Purchaser Age Groups: Selected Frequency Distributions

VARIABLE	YOUNGER GROUP* Relative Frequency (%)	OLDER GROUP** Relative Frequency (%)
Residence:		
Outside of Canada	2.8	0.9
In Canada but outside of Alberta	0.8	1.4
In Alberta in a city (pop. 10,000 +)	3.2	12.8
In Alberta in a town (pop. -10,000)	10.0	8.2
In Alberta on a farm	83.3	74.4
Other	2.8	2.3
Occupation:		
Agricultural	92.0	86.3
Non-agricultural	8.0	13.7
Off-Farm Job, 1981:		
Yes	44.5	34.4
No	55.5	65.6
Spouse Off-Farm Job, 1981:		
Yes	23.1	21.2
No	45.9	72.1
N/A	31.0	6.7
Off-Farm Job, 1982:		
Yes	50.2	35.4
No	49.8	64.6
Spouse Off-Farm Job, 1982:		
Yes	27.5	24.3
No	46.7	70.7
N/A	25.8	5.0
Farm Business Structure:		
Individual	60.4	60.4
Partnership	23.3	12.1
Corporation	5.7	19.8
Joint venture	10.6	7.7
Canada Land Inventory:		
1	3.8	0.5
2	19.2	14.1
3	15.0	16.7
4	4.7	5.2
5	0.4	1.6
6	0.0	0.5
8, Unknown	56.8	61.5
Land Ownership:		
Individual	65.7	52.0
Family partnership	27.5	27.1
Non-family partnership	1.2	2.7
Family corporation	5.2	14.9
Non-family corporation	0.4	3.2

TABLE VI.2 CONTINUED: 1981 Alberta Land Survey
Analysis of Two Agricultural Land Purchaser Age Groups: Selected Frequency Distributions

VARIABLE	YOUNGER GROUP Relative Frequency (%)	OLDER GROUP Relative Frequency (%)
Most Important Reasons for Purchase:		
Expand farm	22.0	25
Child entering farming	0.0	12.0
Establish own farm	48.0	13.0
Investment	5.0	5.0
Tax deferral rollover	0.0	6.0
Close to property	3.0	9.0
Other	7.0	9.0
Parcel previously rented:		
Yes	22.2	22.8
No	77.8	77.1
Loans from FCC, AADC, or FBDB:		
Yes	26.4	37.0
No	51.5	15.6
Did not apply	22.1	47.4
Use in 1982:		
Farmed it myself	90.8	74.1
Rented it out	3.6	15.5
Hired someone to farm it	1.6	5.0
Held it idle	0.8	0.9
Other	3.2	4.5

*Younger Group: Respondents were 36 years of age and younger.
**Older Group: Respondents were 37 years of age and older.

Many of the variables, like "years of farming" and "years as land owner", which were significantly different for the two age groups appear to be directly related to age differences. The mean values for the years of education variable were also consistent with the previously hypothesized notion that the younger purchasers did have more years of education than the older purchasers. In terms of the owned acreage variables, logic suggests that younger purchasers have had less time to accumulate acreage than have the older purchasers. Also, given that credit access and accumulated savings may be less for younger purchasers than for those who are older, younger purchasers may be more able to rent than purchase land. Consequently, it is not surprising that the younger purchasers owned less but rented more agricultural land on average than their older counterparts did. The test results also indicated a difference in the average amount of land sold by those in the two groups. Older purchasers might be expected to have sold more land during the year since they tend to own more land and to have owned land for a longer period of time. Those in the older group, because of their age, may be more likely to be considering the consolidation of their operations. For some older respondents, this may presage retirement.

The majority of the test results for the reasons given for purchase were as expected. For the younger age group, "a child entering farming" was a less important reason for purchase and "establish own farm" was a more important reason for purchase, than for the older group. Older purchasers may consider childrens' ambitions to be more important than would younger purchasers because they are more likely to have children old enough to be considering careers. Younger purchasers, on the other hand, were more likely to consider "establish own farm" a more important reason for purchasing land than were older purchasers, perhaps because the decision to start farming may be made at a younger age. The greater importance of "hedge against inflation" and "tax deferral rollover provisions" for older purchasers may be because they are more likely to be contemplating retirement or estate planning than are younger purchasers. The greater importance of purchase price, cited by younger purchasers, may be due to the increased financial stress (through limited savings and few assets) experienced by that age group when a land purchase is made.

The single most important reason given for purchasing land varied between the groups. While almost equal percentages of the two groups cited "expand farm", the younger group was more inclined to choose "establish own farm" while the older group divided its attentions almost equally between "establish own farm" and "child entering farming."

Older purchasers provided significantly more of their own money, on average, towards land purchases than did younger purchasers. They also obtained more funding from the banking institutions. These individuals presumably have had more time to accumulate assets and credit ratings than have younger purchasers. Younger farmers may take advantage of special loan programs offered by the federal and provincial governments and the test results indicate that they do this, at least in terms of AADC financing. Surprisingly, financing from family sources was not significantly greater for younger than older purchasers. A large percentage of the older group did not apply to the government financial agencies and accordingly many bought land without their help. A large proportion of the younger group indicated they would not have bought land without the help of AADC, FCC, or FBDB.

The business structure of farm operations of the two age groups differed very little though partnerships and joint ventures were more common for younger than for older purchasers and corporations were more common for older than for younger purchasers. These responses, and thus the frequency distributions for them, pertain only to farmland purchasers who gave agriculture as an occupation. Landownership structure had much the same type of pattern as did the business structure of farm operation. Family corporation purchasers were more common among older purchasers but young purchasers were more inclined to own land on their own.

It was not surprising to find a large percentage of both young and old purchasers residing on farms in Alberta. The relatively lower percentage of older individuals residing on farms and the higher percentage living in cities, may be due to retirement or semi-retirement by some older land purchasers. This result is consistent with the suggestion formulated in the discussion of differences in reasons for purchasing land by the older and younger purchasers on the previous page. The difference in residence between the two groups may be partly explained by the feature that 92 percent of the

younger purchasers gave their occupation as farming while slightly over 86 percent of the older purchasers gave this same answer. Differences in how the land was used in 1982 between the two groups are evident. The older group was somewhat more inclined to rent out their purchased property and less inclined to farm it themselves than the younger group. This result may, in part, indicate the influence of the slightly higher proportion of purchasers without an agricultural occupation in the older group.

C. Detailed Analysis of the Residence of Respondents

Foreign Purchasers

Many respondents to the survey expressed concern over the impact of foreign purchasers on the price of farmland in Alberta and some of the popular press seems to perceive this as well. The survey, however, only generated responses from 7 (1.5 percent of 473 respondents) farmland purchasers who resided outside of Alberta and only 2 of these were from outside of Canada. Only .37 percent (or 7) of the 1990 questionnaires that were mailed for this survey went to individuals not living in Canada; 1.7 percent (or 34) went to individuals not living in Alberta; and 97.9 percent (or 1,948) went to residents of Alberta. The proportion (2.07 percent) of questionnaires sent to non-residents of Alberta is fairly consistent with the proportion (1.5 percent) of respondents to the questionnaire who resided outside of Alberta. These results suggest that there are probably too few purchasers in this category to have any measurable effect on land prices in the province in general. Most of the frequency distributions of variables for this group of respondents were wide ranging and consequently few generalizations can be made. Market values of the acres purchased by the non-residents of Alberta ranged from $200 to $1,500 per acre and the parcels were from 15 to 170 miles away from a city. All of the farmland purchased was located in municipalities south of Wetaskiwin and the majority of the parcels were very close to the United States' border. In terms of reasons for purchasing farmland, half of the respondents felt "establish own farm", "close to property", and "investment" were very important reasons. These purchasers did not seem to be concerned with such reasons as "anticipation of capital gains", "moving operations" and "tax deferral rollover provisions". The most important reason for purchasing land was

"establish own farm" and this result coincided with how the land was used in 1982. It is possible that purchases of agricultural land by foreigners do have an effect in certain areas of the province but the extent of purchases in 1981 does not suggest a major influence from this source.

Urban Versus Rural Purchasers

The perception of many of the survey respondents and of the popular press as well is that urban residents may also have had an influential impact on the agricultural land market in Alberta in 1981. This section outlines differences in responses between urban and rural residents who purchased agricultural land. Urban residents were taken to be those who resided in towns (population less than 10,000) or cities (population 10,000 and more) in Alberta while rural residents resided on farms. The Mann-Whitney U test was used to determine the significance of any differences between these two residency groups. This information is given in Table VI.3.

There are not many significant differences between the two groups of residents - a feature which is probably due to the high proportion of farmers in both groups. Frequency distributions for nominal data are given in columns 1 and 2 in Table VI.4.

Approximately 81 (17 percent) of the 473 respondents to this portion of the survey were residing in urban centers and yet the majority of these were employed in agriculture. Although the percentage of respondents residing in urban centers is low compared to that for rural residents (78.9 percent), this may indicate that a significant percentage of land purchasers who were farmers may not have been living on their own farm land. Sixty percent of the urban respondents farmed their own land in 1982, and 40 percent used the property in some other way. This 40 percent figure may include some retired individuals as the Mann-Whitney U test indicates that retirement was a significantly more important reason for selling land for urban residents than for rural residents. Retirement may be a gradual process for farmers and though some farmers may sell some land for retirement reasons and may have moved to an urban center, they may still be actively farming.

Urban residents were expected to purchase property closer to cities and the test results indicated this may have been the case. Urban residents who were farming their

TABLE VI.3: 1981 Alberta Land Survey
Analysis of Three Agricultural Land Purchaser Residence Groups: Mann-Whitney U Test Results and Residence Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: URBAN GROUP**	MEAN VALUE: RURAL GROUP***	MEAN VALUE: CITY GROUP****
Age	.2326	37.7	35.6	48.1
Education	.0021*	13.4	12.1	13.8
Years of farming	.2625	10.5	12.4	11.9
Years as land owner	.1592	8.3	9.2	8.4
Parcel–total acreage	.0143*	344.8	457.2	260.0
Parcel–cultivated acreage	.0355*	253.0	318.7	205.0
Parcel–market value	.3873	861.0	641.6	1196.3
Parcel–distance to city	.0131*	61.4	74.6	46.6
Reasons For Purchase:				
Expand farm	.0852	3.4	3.7	3.3
Increase farm income	.0385*	3.3	3.8	3.2
Spread fixed costs	.0946	2.8	3.1	2.9
Use machinery	.2209	2.8	3.1	2.8
Use labor	.1231	2.5	2.8	2.5
Child entering farming	.2678	2.5	2.7	2.4
Establish own farm	.4754	3.8	3.8	3.7
Second home	.8431	1.9	1.9	2.1
Recreation	.0051*	1.8	1.4	2.4
Nonagricultural development	.0190*	1.7	1.3	2.0
Investment	.3095	3.2	3.0	3.2
Inflation hedge	.4754	2.8	2.6	3.2
Capital gains	.4941	2.3	2.2	2.8
Tax deferral rollover	.1326	2.0	1.8	2.3
Move farm operation	.4938	1.8	1.8	1.7
Move from city/town	.0071*	2.4	2.0	2.7
No rental land	.0137*	1.9	2.3	1.9
Close to property	.9046	3.1	3.1	3.5
Close to residence	.1219	2.5	2.9	2.8
Good price	.3602	3.4	3.5	3.4
Other reasons	.7960	4.3	4.2	4.0

TABLE VI.3 CONTINUED: 1981 Alberta Land Survey
Analysis of Three Agricultural Land Purchaser Residence Groups: Mann-Whitney U Test Results and Residence Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: URBAN GROUP	MEAN VALUE: RURAL GROUP	MEAN VALUE: CITY GROUP
Prior acres owned	.4073	537.6	598.1	573.0
Following acres owned	.0159*	749.7	982.1	690.8
Prior acres rented	.0419*	292.1	350.9	97.9
Following acres rented	.0016*	297.1	373.5	125.5
Total acres purchased 1981	.1511	383.8	472.9	268.6
Total acres sold	.1317	175.2	120.23	143.8
Reasons for Sale:				
Property expropriated	.7884	1.2	1.3	1.7
Urban expansion	.7794	1.5	1.6	3.0
Capital gains	.9365	2.1	2.3	2.8
Move farm operation	.6771	3.9	3.5	4.0
Another job	.5984	1.5	1.2	1.7
Financial problems	.6497	2.4	2.4	1.7
Speculation	.7019	1.8	1.9	3.0
Farm too large	.2833	1.5	1.2	1.7
Changing farm operation	.3164	2.5	2.9	3.5
Retirement, health	.0003*	2.2	1.1	3.0
Other reasons	.2241	2.1	3.3	3.0
Financing Sources:				
Own funds	.0000*	41.3	22.3	43.8
Banks etc.	.0557	29.0	22.4	33.8
AADC	.0000*	9.1	33.9	2.5
FCC	.4664	4.9	8.4	2.7
FBDB	.4979	0.0	.3	0.0
Seller	.0001*	13.7	4.6	13.9
Family	.6723	1.9	4.8	3.1
Other Sources	.1470	0.0	2.1	0.0

*Denotes statistically significant at .05.
**Urban Group: Respondents resided in a city (population 10,000 and over) or a town (population under 10,000)
***Rural Group: Respondents resided on a farm
****City Group: Respondents resided on a city (population 10,000 and over)

TABLE VI.4: 1981 Alberta Land Survey
Analysis of Three Agricultural Land Purchaser Residence Groups: Selected Frequency Distributions

VARIABLE	URBAN GROUP* Relative Frequency (%)	RURAL GROUP** Relative Frequency (%)	CITY GROUP*** Relative Frequency(%)
Occupation:			
Agricultural	63.6	96.9	51.4
Non-agricultural	36.4	3.2	48.6
Off-Farm Job, 1981:			
Yes	72.9	35.1	88.2
No	27.1	64.9	11.8
Spouse Off-Farm Job, 1981:			
Yes	25.0	21.6	29.4
No	47.9	58.8	58.8
N/A	27.1	19.6	11.8
Off-Farm Job, 1982:			
Yes	76.6	39.2	87.5
No	23.4	60.8	12.5
Spouse Off-Farm Job, 1982:			
Yes	29.2	25.7	23.5
No	50.0	58.2	70.6
N/A	20.8	16.1	5.9
Farm Business Structure:			
Individual	59.6	60.6	50.0
Partnership	29.8	16.7	25.0
Corporation	10.6	11.9	25.0
Joint venture	0.0	10.8	0.0
Canada Land Inventory:			
1	4.7	2.1	7.7
2	7.8	18.6	7.7
3	15.6	15.3	19.2
4	4.7	5.3	3.8
5	0.0	1.2	0.0
6	0.0	0.0	
8, Unknown	67.2	57.2	61.5
Land Ownership:			
Individual	60.3	59.7	57.1
Family partnership	25.6	27.3	25.7
Non-family partnership	3.8	1.6	2.9
Family corporation	9.0	10.3	11.4
Non-family corporation	1.3	1.1	2.9

TABLE VI.4 CONTINUED: 1981 Alberta Land Survey
Analysis of Three Agricultural Land Purchaser Residence Groups: Selected Frequency Distributions

VARIABLE	URBAN GROUP Relative Frequency (%)	RURAL GROUP Relative Frequency (%)	CITY GROUP Relative Frequency(%)
Most Important Reasons for Purchase:			
Expand farm	17.6	25.4	20.7
Child entering farming	11.4	5.2	10.3
Establish own farm	27.9	33.5	13.8
Investment	7.4	3.8	6.9
Close to property	10.3	5.2	17.2
Other	5.9	8.5	6.9
Parcel previously rented:			
Yes	16.7	23.9	5.7
No	83.3	76.1	94.3
Loans from FCC, AADC, or FBDB:			
Yes	42.2	28.1	32.1
No	14.1	42.5	10.7
Did not apply	43.8	29.4	57.1
Use in 1982:			
Farmed it myself	60.3	90.4	47.2
Rented it out	21.8	5.5	27.8
Hired someone to farm it	12.8	1.1	16.7
Held it idle	1.3	0.3	2.8
Other	3.8	2.7	5.6

*Urban Group: Respondents resided in a city (population 10,000 and over) or a town (population under 10,000).
**Rural Group: Respondents resided on a farm.
***City Group: Respondents resided in a city (population 10,000 and over).

property could be expected to consider traveling time and expenses when they are buying land. "Recreation" and "nonagricultural development" were rated as more important reasons for purchase of agricultural land by urban than by rural residents although the mean values of these reasons for both groups are small. These reasons also indicate some tendency for greater emphasis on investment, speculative, and recreational motives for buying land by urban residents. They seemed to be less concerned with the income earning potential of farmland than rural residents were. The significant difference in level of importance of " move from city/town" as a reason for purchasing farmland between the residency groups suggests that, although this reason was not overwhelmingly important as a factor, many of the urban residency purchasers were considering moving from their urban residences or felt a need to "get away from it all". Locations of purchases by both rural and urban residency purchasers are shown in Figure VI.1.

The two residency groups were found to be significantly different in terms of the percentage downpayment made for their land purchases and amount of funding received from AADC and from sellers. Urban residents were more likely to have a larger downpayment and receive more financing from the seller. Rural residents were more likely to obtain a higher percentage of financing from AADC. This last difference is probably due to the larger percentage of farmers in the rural residence group and the restriction of AADC financing to that occupational group. The greater average percentage of downpayment on purchases by urban residents could be due to several things. The urban residents have a significantly higher education than the urban residents and this may indicate a higher salary, particularly since a greater percentage (40.5 percent) of urban residents had a second occupation as compared to rural residents (24 percent), suggesting a larger income and consequently a greater savings capacity for that group.

Both groups had very similar distributions of the types of land ownership. Greater differences were apparent in the business structures of those with farming operations. While a remarkably high proportion of both groups operated as sole proprietorships, the individuals in the rural residency group were less inclined to farm partnership operations and more inclined to farm joint venture operations than were the individuals in the urban residency group. This may be because the high proportion of farmers in the rural residency group made that group more aware of the benefits of joint ventures, over

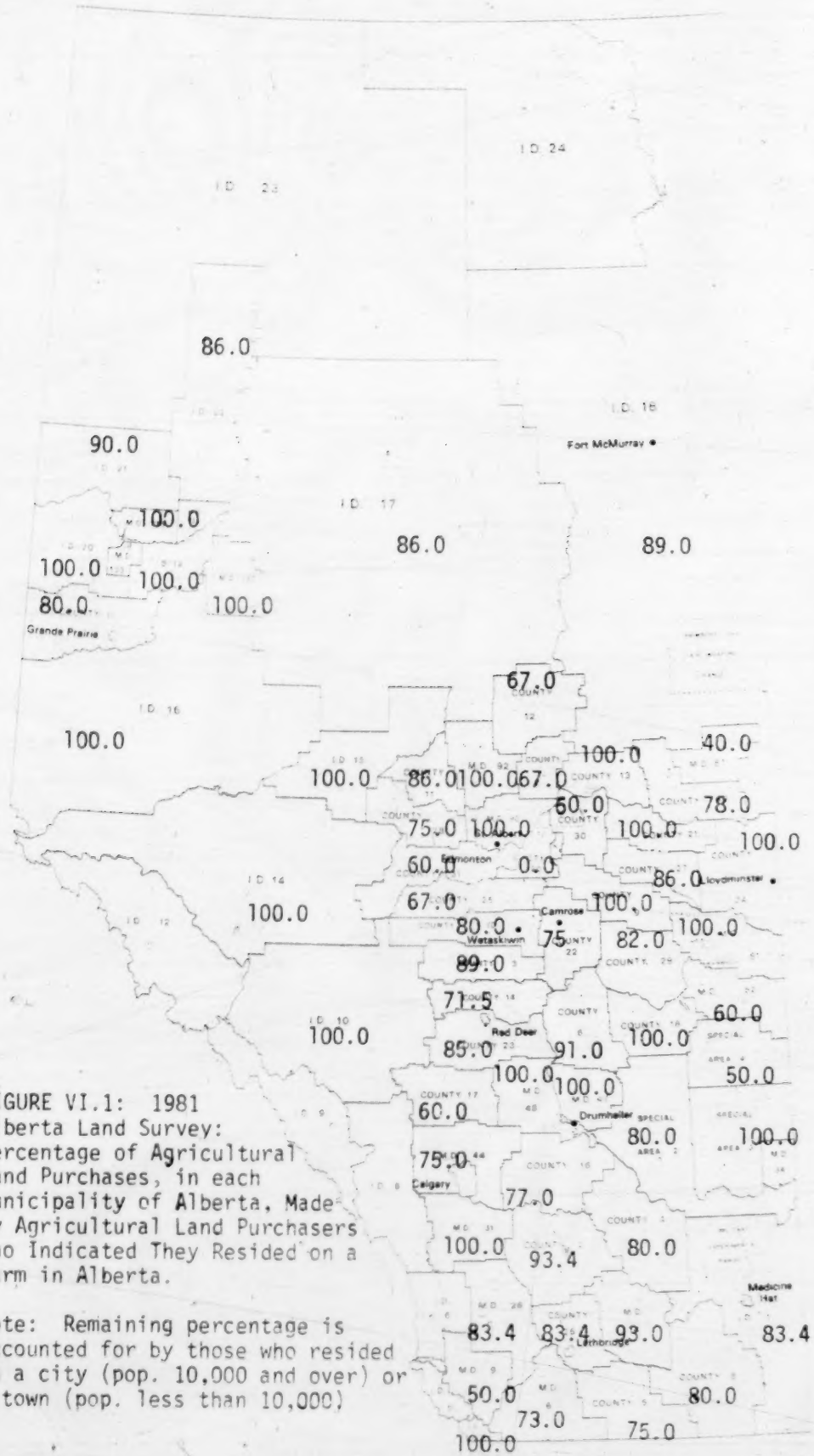

FIGURE VI.1: 1981 Alberta Land Survey: Percentage of Agricultural Land Purchases, in each Municipality of Alberta, Made by Agricultural Land Purchasers who Indicated They Resided on a Farm in Alberta.

Note: Remaining percentage is accounted for by those who resided in a city (pop. 10,000 and over) or a town (pop. less than 10,000)

partnerships, to a farming operation. These benefits were discussed in Chapter 3.

Relatively more of the rural versus urban respondents had, at some point, rented the land they purchased. This may be due to the larger number of farmers in the rural group. A greater percentage of rural than urban respondents indicated they would not have bought their property without the assistance of FCC, AADC or FBDB. Since a greater proportion of the rural group was employed in agriculture and since this is a requirement to obtaining a loan from these agencies, this result is not surprising.

City Purchasers: A Comparison

The high percentage (36.4) of urban residency respondents who had an agricultural occupation suggested that a more detailed examination of this group might be beneficial. Frequency distributions were calculated for the group of respondents who resided in cities (population 10,000 and over) and these were compared to those calculated previously for the urban and rural groups. This information is shown in column 3 of Table VI.4.

The respondents who resided in cities were not employed in agriculture nor were they farming their own land in 1982 to the extent that the urban residency respondents were. Partnership and corporation business structures were more common for the city residency respondents who were farming than for the rural and urban residency groups. The land ownership and CLI classification distributions for the city residency group changed relatively little from those of the other residency groups. Fewer respondents in the city group had ever rented their land than had those in the urban group and more had not applied to the special credit groups for financing. The city residency group had several most important reasons for making land purchases. "Expand existing farming operation" was slightly more important, but "establish own farm" was less important, for the city residency group than for the urban residency group.

The means of a number of variables were compared among the three residency groups. This information is given in Table VI.3. The city group had a higher average age and education. The average number of acres they purchased was lower, but the market value of the property purchased was higher. The average distance of the parcels from the cities was much lower. The city group purchased, on average, fewer acres per parcel,

and fewer acres in total, than did the urban and rural groups. The city group also purchased a higher proportion of cultivated acreage than did the other two groups. They owned and rented fewer acres on average than those groups as well but they sold more acres than the rural group and less than the urban group. The city group obtained the greatest average percentage of financing from their own funds and from the banks.

D. Detailed Analysis of Occupations of Respondents

The discussion that follows compares purchasers with agricultural occupations to purchasers with other occupations. Respondents who indicated they had both an agricultural and a non-agricultural occupation were put in the agricultural category. Almost 87 percent (or 420) of the 473 respondents who gave an occupation in the survey gave their occupation as agricultural compared to 13 percent (or 53) who had other occupations. The "off-farm job", "farm business structure", and "years of farming" variables could not be compared for the two groups since only the agricultural occupation respondents replied to them. The results of the Mann-Whitney U test are shown in Table VI.5 and the frequency distributions for this analysis are shown in Table VI.6.

In comparing owned acreage, agricultural purchasers owned more land and also purchased larger parcels of agricultural land than did non-agricultural purchasers. For both occupation groups, purchases and holdings tended to be in fractions or multiples of 160 acres.

There are small but significant differences in the characteristics of the two occupational groups. Market value of the purchased property and distance from the parcel to the nearest city were not significantly different between the two groups, however. One possible explanation of the lack of much difference in these features may be because the survey excluded parcel sizes of 60 acres or less. Higher priced agricultural land is likely to be closer to major centers and in smaller parcels than 60 acres.

The locations of farmland purchases by respondents with agricultural and non-agricultural occupations are shown on Figure V.2., by municipality. The concentration of purchases by both farmers and non-farmers appears to be greatest in the Peace River

TABLE VI.5: 1981 Alberta Land Survey
Analysis of Two Agricultural Land Purchaser Occupation Groups:
Mann-Whitney U Test Results and Occupation Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: AGRICULTURAL GROUP**	MEAN VALUE: NON-AGRICULTURAL GROUP***
Age	.0055*	36.3	42.5
Education	.0151*	12.2	13.3
Years as land owner	.0001*	9.5	5.8
Parcel-total acreage	.0043*	455.6	296.6
Parcel-cultivated acreage	.0003*	324.0	176.7
Parcel-market value	.3783	688.6	609.6
Parcel-distance to city	.7162	72.0	73.7
Reasons For Purchase:			
Expand farm	.0000*	3.8	2.3
Increase farm income	.0000*	3.8	3.5
Spread fixed costs	.0000*	3.1	2.1
Use machinery	.0000*	3.1	1.8
Use labor	.0000*	2.8	1.8
Child entering farming	.1535	2.7	2.3
Establish own farm	.3025	3.8	3.6
Second home	.9954	1.8	1.8
Recreation	.0000*	1.4	2.3
Nonag. development	.0098*	1.3	1.8
Investment	.0026*	3.0	3.7
Inflation hedge	.0002*	2.5	3.4
Capital gains	.0099*	2.1	2.7
Tax deferral rollover	.2196	1.8	2.0
Move farm operation	.0648	1.8	1.4
Move from city/town	.0000*	1.9	2.8
No rental land	.0005*	2.3	1.5
Close to property	.0098*	3.2	2.4
Close to residence	.0009*	2.9	1.9
Good price	.8663	2.5	3.6
Other reasons	.3321	4.2	4.4
Prior acres owned	.0028*	614.9	339.6
Following acres owned	.0001*	979.5	618.6
Prior acres rented	.0000*	372.6	55.3
Following acres rented	.0000*	389.9	83.95
Total acres purchased 1981	.0419*	471.9	384.3
Total acres sold	.3779	142.1	34.2
Financing Sources:			
Own funds	.0000*	23.8	48.6
Banks etc.	.4354	23.2	27.3
AADC	.0003*	32.0	8.1
FCC	.0591	8.5	1.9
FBDB	.6076	.2	0.0
Seller	.1710	6.0	8.8
Family	.3987	4.4	3.0
Other Sources	.9716	1.7	2.0

*Denotes statistically significant at .05.
**Agricultural Group: Respondents indicated an agricultural occupation
***Non-Agricultural Group: Respondents did not indicate an agricultural occupation

TABLE VI.6: 1981 Alberta Land Survey
Analysis of Two Agricultural Land Purchaser Occupation Groups:
Selected Frequency Distributions

VARIABLE	AGRICULTURAL GROUP* Relative Frequency (%)	NON-AGRICULTURAL GROUP** Relative Frequency (%)
Residence:		
Outside of Canada	0.5	0.0
In Canada but outside of Alberta	0.2	7.7
In Alberta in a city (pop. 10,000 +)	4.3	34.6
In Alberta in a town (pop. -10,000)	7.7	12.2
In Alberta on a farm	85.9	25.0
Other	1.4	11.5
Canada Land Inventory:		
1	2.1	4.5
2	17.5	11.4
3	16.0	13.6
4	5.0	4.5
5	1.0	0.0
6	0.3	0.0
8. Unknown	58.1	65.9
Land Ownership:		
Individual	60.2	52.6
Family partnership	27.2	28.1
Non-family partnership	1.2	7.0
Family corporation	10.4	5.3
Non-family corporation	1.0	7.0
Most Important Reasons for Purchase:		
Expand farm	26.0	4.3
Child entering farming	5.0	8.5
Establish own farm	33.0	29.8
Recreation	0.0	8.5
Investment	4.0	14.9
Move from city/town	3.0	12.8
Close to property	6.0	0.0
Other	8.0	10.6
Parcel previously rented:		
Yes	23.8	12.7
No	76.2	87.3
Loans from FCC, AADC, or FBDB:		
Yes	29.7	40.4
No	39.5	10.6
Did not apply	30.8	48.9
Use in 1982:		
Farmed it myself	89.8	32.1
Rented it out	4.4	44.6
Hired someone to farm it	1.9	12.5
Held it idle	0.2	5.4
Other	3.6	5.4

*Agricultural Group: Respondents indicated an agricultural occupation.
**Non-Agricultural Group: Respondents did not indicate an agricultural occupation.

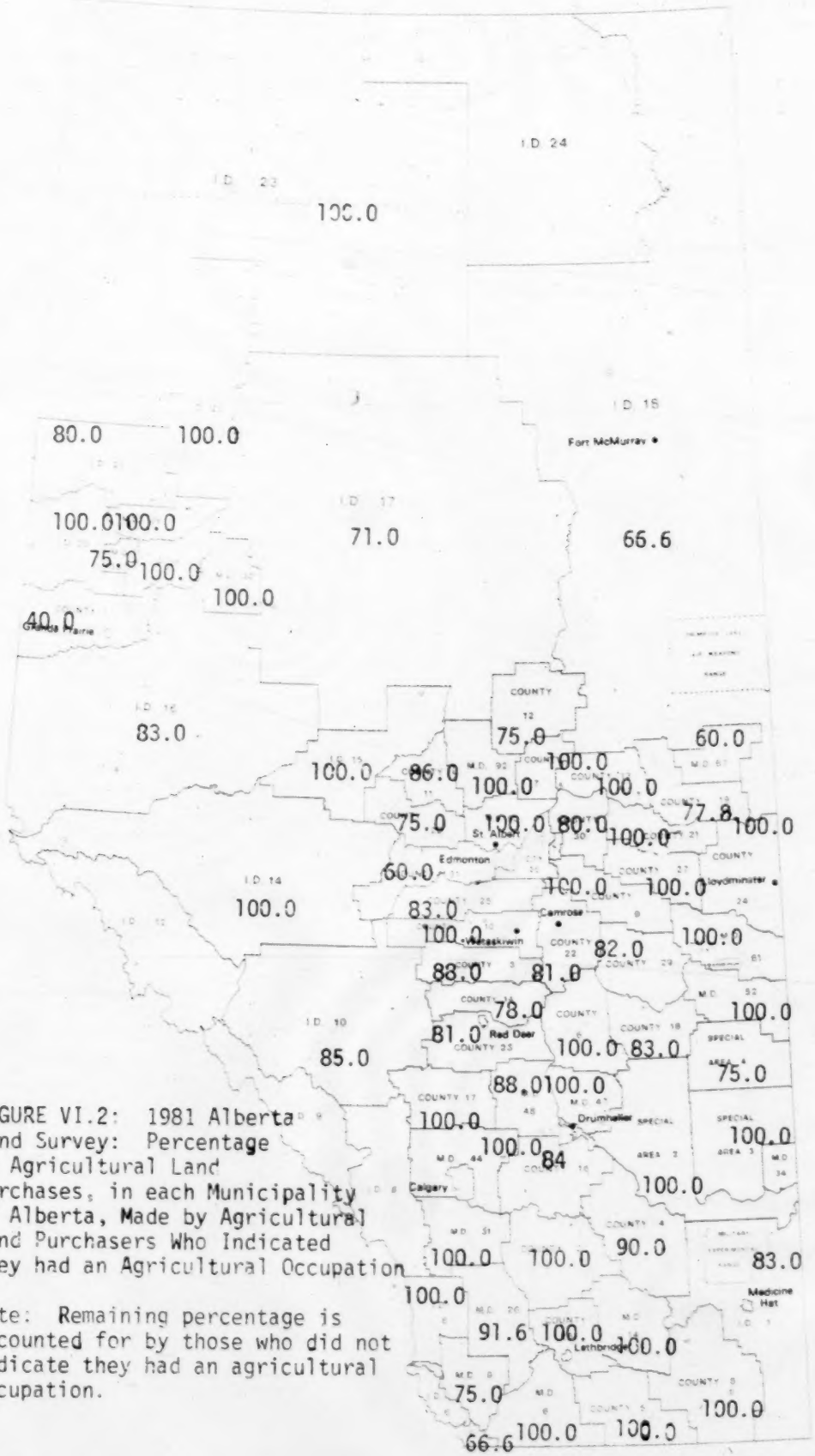

FIGURE VI.2: 1981 Alberta Land Survey: Percentage of Agricultural Land Purchases, in each Municipality of Alberta, Made by Agricultural Land Purchasers Who Indicated They had an Agricultural Occupation

Note: Remaining percentage is accounted for by those who did not indicate they had an agricultural occupation.

area. This is probably a reflection of lower priced land in that area[92]. This region is viewed as a major area within Alberta for agricultural expansion[93]. The remainder of the purchases appear to be fairly evenly balanced around the province though non-farmers purchased a greater proportion of parcels around Edmonton than did farmers.

Ownership of the purchased land differed between the two groups primarily in the extent of non-family partnerships and corporations. Non-farmers were more frequently in these categories.

Farmer purchasers cited "expand farm", "increase farm income", the economies of scale reasons ("spread fixed cost", "use labor", and "use machinery"), and "no rental land" as somewhat more important reasons for purchasing agricultural land than did non-farmer purchasers. These reasons might be viewed as "production-related" reasons which relate to income that can be derived by farming the land. Non-farmer purchasers tended to rate aesthetic and non-farming reasons such as "recreation" and "nonagricultural development" as more important than did farmer purchasers. They also cited "investment", "inflation hedge", and "capital gains", all of which are related to the longer-run capital appreciation benefits of holding land, as slightly more important than did farmer purchasers. Once again, the group of respondents who had an agricultural occupation seemed to place greatest importance on "expand farm" and "establish own farm". The group of respondents who did not have an agricultural occupation also stressed "establish own farm" but they placed more emphasis on "investment", "move from city/town", "child entering farming", and "recreation" than they did on "expand farm". These results indicate that non-farmers may have some tendency to place more emphasis on recreational, lifestyle, and investment motives in buying land.

Probably the most obvious differences between the two occupation groups of purchasers were in terms of rented acreage. A priori, it was not expected that non-agricultural purchasers would rent land from others, but 9.3 percent of the purchasers who had a non-agricultural occupation indicated they did rent farmland from others before their purchase and 14.5 percent of them rented land after their land

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[92]Alberta Agriculture reported the average nominal value per acre of agricultural land in Alberta in 1980 was $385.61 compared to an average nominal value per acre of land in the Peace River area in 1980 of $259.94. (Source: Melville D. Miller, *1981 Agricultural Real Estate Values in Alberta*, p. 28.)

[93]Kelly and Moreau, pp. 25 and 53.

purchase. An examination of how these respondents were using their purchased land in 1982 indicated that some of the purchasers were farming it. This would seem to indicate that farming was an occupation of these purchasers even though they did not view themselves as having an agricultural occupation according to their responses. In fact, over 32 percent of all purchasers who did not consider themselves to have an agricultural occupation farmed their land themselves in 1982.

Financing for the land purchase appears to have been significantly different between the groups only in terms of relative proportions of downpayments and funding from AADC. The higher percentage of funding received by the farm occupation group from AADC is probably due to AADC's restriction of only funding farm businesses. The higher percentage downpayment paid by purchasers without an agricultural occupation may be due to several interconnected reasons. Their non-agricultural occupations may restrict them from sources of concessional finance and restrain them to commercial terms and sources of credit. Since, on average, as the results indicate, these purchasers are older than the farming purchasers, they may have acquired more capital through savings to provide a larger downpayment. Their higher education and the fact that they have a non-farm occupation may suggest that some of them have a higher disposable income than most farmers and consequently their capacity to save may be greater.

E. Detailed Analysis of Respondents with an Agricultural Occupation who also had an Off-Farm Job

Most of the discussion which follows is concerned with the differences between purchasers of agricultural land who did and did not have off-farm jobs in 1981 and 1982. This more detailed analysis was included in an effort to obtain more information about the effects of off-farm jobs on land purchasing individuals. That this analysis pertains only to individuals who gave farming as an occupation should be noted. Of the 413 respondents to this portion of the survey, 166 (40.2 percent) indicated that they had an off-farm job in 1981 before they purchased land and 180 (43.8 percent) indicated that they had an off-farm job in 1982, following their land purchase.

The Mann-Whitney U test was used to determine if any significant differences existed between respondents to the survey who did, and did not, have off-farm jobs in

1981 and 1982. The results of the test for the groups of respondents who did and did not have an off-farm job in 1981 before they purchased land are shown in Table VI.7 and the accompanying frequency distributions for these groups are shown in Table VI.8 . The results of the test for the groups of respondents who did and did not have an off-farm job in 1982 are given in Table VI.9 and the accompanying frequency distributions for these groups are given in Table VI.10. Comparative frequency distributions for the 1980 and 1981 groups are given in Tables V.7, V.8 and V.9 in Chapter Five.

Four variables, including "parcel-cultivated acreage", "total acres purchased 1981", "total acres sold", and "another job" (a reason for selling land), were significantly different for those with and without off-farm jobs in 1981 before agricultural land was purchased but not for those with and without off-farm jobs in 1982. Why these variables would be significantly different for those with and without off-farm jobs in 1981 before agricultural land was purchased but not significantly different for those with and without off-farm jobs in 1982 is not clear. The test results of the other variables remained the same for both the 1981 and 1982 off-farm job groups. That is, the remaining significantly or insignificantly different variables were so for the two groups in the 1981 off-farm job category as well as for the two groups in the 1982 off-farm job category.

The first four significantly different variables, "age", "education", "years of farming", and "years as a land owner", suggested a young, beginning farmer status for those respondents with off-farm jobs. The average values of these variables changed little between those with and without off-farm jobs in 1981 and those with and without such jobs in 1982. Fifty percent of those with an off-farm job in 1981 had owned land for two years or less, in comparison to farmers without an off-farm job in 1981 of whom only 29 percent had owned land for two years or less. Fifty percent of those with off-farm jobs in 1981 had been farming for five years or less while only 21 percent of those without off-farm jobs in 1981 had been farming for that period of time. These figures were very similar to those with and without off-farm jobs in 1982.

Four reasons for purchasing land were significantly different in terms of importance, between those with, and those without, off-farm jos. "Spread fixed costs", "establish own farm", "recreation", and "move from city/town" may appeal more to the younger purchasers than to the older ones. The importance of these reasons to younger

TABLE VI.7: 1981 Alberta Land Survey
Analysis of Agricultural Land Purchasers With an Agricultural Occupation Who Did, and Did Not, Have an Off-Farm Job In 1981 Before a Purchase of Agricultural Land was Made: Mann-Whitney U Test Results and Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: "DID" GROUP**	MEAN VALUE: "DID NOT" GROUP***
Age	.0481*	34.7	37.1
Education	.0001*	12.8	11.7
Years of farming	.0000*	7.9	15.3
Years as land owner	.0000*	6.0	11.6
Parcel–total acreage	.1228	386.6	483.9
Parcel–cultivated acreage	.0073*	257.7	353.6
Parcel–market value	.0616	690.0	696.5
Parcel–distance to city	.2324	77.4	67.6
Reasons For Purchase:			
Expand farm	.5867	3.8	3.8
Increase farm income	.8560	3.8	3.9
Spread fixed costs	.0427*	3.0	3.3
Use machinery	.0991	3.0	3.2
Use labor	.8544	2.8	2.8
Child entering farming	.2931	2.6	2.8
Establish own farm	.0000*	4.5	3.4
Second home	.7006	1.9	1.8
Recreation	.0036*	1.6	1.3
Nonagricultural development	.2398	1.4	1.3
Investment	.8774	2.9	2.9
Inflation hedge	.6780	2.6	2.5
Capital gains	.6309	2.0	2.2
Tax deferral rollover	.1126	1.6	1.9
Move farm operation	.8106	1.8	1.8
Move from city/town	.0000*	2.5	1.6
No rental land	.8458	2.4	2.3
Close to property	.1215	3.0	3.3
Close to residence	.0974	2.7	3.0
Good price	.3039	3.4	3.6
Other reasons	.5992	4.3	4.1

TABLE VI.7 CONTINUED: 1981 Alberta Land Survey
Analysis of Agricultural Land Purchasers With an Agricultural Occupation Who Did, and Did Not, Have an Off-Farm Job in 1981 Before a Purchase of Agricultural Land was Made: Mann-Whitney U Test Results and Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: "DID" GROUP	MEAN VALUE: "DID NOT" GROUP
Prior acres owned	.0000*	285.0	848.0
Following acres owned	.0000*	606.0	1212.0
Prior acres rented	.0000*	225.0	479.0
Following acres rented	.0088*	275.0	477.0
Total acres purchased 1981	.0148*	392.0	507.0
Total acres sold	.0078*	125.0	156.0
Reasons for Sale:			
Property expropriated	.6776	1.1	1.3
Urban expansion	.6460	1.4	1.6
Capital gains	.8207	2.2	2.2
Move farm operation	.3395	4.0	3.5
Another job	.0206*	1.8	1.1
Financial problems	.1923	2.8	2.2
Speculation	.5389	1.9	1.8
Farm too large	.4360	1.4	1.3
Changing farm operation	.3520	3.4	2.9
Retirement, health	.8657	1.2	1.3
Other reasons	.0058*	1.7	3.6
Financing Sources:			
Own funds	.6523	21.6	24.4
Banks etc.	.0780	19.1	25.7
AADC	.0045*	40.7	26.7
FCC	.5374	7.1	9.8
FBDB	.2340	0.0	.4
Seller	.8111	6.4	5.8
Family	.5984	4.2	4.7
Other Sources	.3348	0.8	2.3

*Denotes statistically significant at .05.
"Did" Group: Respondents did have an off-farm job in 1981 before a purchase of agricultural land was made.
"Did Not" Group: Respondents did not have an off-farm job in 1981 before a purchase of agricultural land was made.

TABLE VI.8: 1981 Alberta Land Survey: Analysis of Agricultural Land Purchasers With an Agricultural Occupation Who Did, and Did Not, Have an Off-Farm Job in 1981 Before a Purchase of Agricultural Land was Made: Selected Frequency Distributions

VARIABLE	"DID GROUP"* Relative Frequency (%)	"DID NOT" GROUP** Relative Frequency (%)
Residence:		
Outside of Canada	0.0	0.8
In Canada but outside of Alberta	0.6	0.0
In Alberta in a city (pop. 10,000 +)	9.1	0.8
In Alberta in a town (pop. -10,000)	12.2	4.5
In Alberta on a farm	76.2	93.5
Other	1.8	0.4
Farm Business Structure:		
Individual	67.7	55.6
Partnership	20.5	17.0
Corporation	3.7	17.0
Joint venture	8.1	10.0
Canada Land Inventory:		
1	2.6	1.8
2	17.2	18.1
3	13.9	17.7
4	6.6	3.5
5	1.3	0.9
6	0.0	0.4
8; Unknown	58.3	57.5
Land Ownership:		
Individual	62.0	60.0
Family partnership	31.3	24.5
Non-family partnership	1.2	0.4
Family corporation	4.9	14.3
Non-family corporation	0.6	0.8
Most Important Reasons for Purchase:		
Expand farm	24.5	26.0
Establish own farm	45.2	25.0
Close to property	5.8	7.0
Other	5.8	9.0
Parcel previously rented:		
Yes	25.8	21.5
No	74.2	78.0
Loans from FCC, AADC, or FBDB:		
Yes	25.7	32.4
No	47.1	35.2
Did not apply	27.1	32.4
Use in 1982:		
Farmed it myself	89.4	91.4
Rented it out	5.0	3.3
Hired someone to farm it	2.5	1.6
Held it idle	0.0	0.4
Other	3.1	3.3

*"Did" Group: Respondents had off-farm jobs in 1981 before land purchase.
**"Did Not" Group: Respondents had no off-farm jobs in 1981 before land purchase.

TABLE VI.9: 1981 Albert Land Survey
Analysis of Agricultural Land Purchasers with an Agricultural Occupation Who Did, and Did Not, Have an Off-Farm Job in 1982: Mann-Whitney U Test Results and Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: DID GROUP**	MEAN VALUE: DID NOT GROUP***
Age	.0062*	34.0	37.4
Education	.0004*	12.7	11.7
Years of farming	.0000*	8.5	15.0
Years as land owner	.0000*	6.3	11.5
Parcel–total acreage	.2138	364.2	469.2
Parcel–cultivated acreage	.4313	279.2	326.6
Parcel–market value	.0508	705.3	682.2
Parcel–distance to city	.2234	75.9	70.5
Reasons For Purchase:			
Expand farm	.8540	3.8	3.8
Increase farm income	.6385	3.8	3.9
Spread fixed costs	.0073*	2.9	3.4
Use machinery	.1528	3.0	3.2
Use labor	.1799	2.7	2.9
Child entering farming	.0521	2.5	2.8
Establish own farm	.0000*	4.3	3.4
Second home	.4176	1.9	1.8
Recreation	.0293*	1.5	1.3
Nonagricultural development	.0586	1.4	1.2
Investment	.8305	3.0	2.9
Inflation hedge	.4718	2.6	2.5
Capital gains	.3581	2.0	2.2
Tax deferral rollover	.3167	1.7	1.9
Move farm operation	.4696	1.9	1.8
Move from city/town	.0019*	2.2	1.7
No rental land	.5347	2.4	2.3
Close to property	.2710	3.1	3.3
Close to residence	.2605	2.8	2.9
Good price	.5482	3.5	3.6
Other reasons	.6091	4.4	4.1

TABLE VI.9 CONTINUED: 1981 Albert Land Survey
Analysis of Agricultural Land Purchasers with an Agricultural Occupation Who Did, and Did Not, Have an Off-Farm Job in 1982:
Mann-Whitney U Test Results and Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: DID GROUP	MEAN VALUE: DID NOT GROUP
Prior acres owned	.0000*	315.0	853.0
Following acres owned	.0000*	645.0	1218.6
Prior acres rented	.0003*	255.8	474.6
Following acres rented	.0011*	276.6	502.1
Total acres purchased 1981	.5077	404.3	478.0
Total acres sold	.8009	118.8	151.5
Reasons for Sale:			
Property expropriated	.1805	1.0	1.3
Urban expansion	.6373	1.7	1.5
Capital gains	.7706	2.0	2.3
Move farm operation	.4842	3.4	3.7
Another job	.6593	1.4	1.2
Financial problems	.3343	1.9	2.5
Speculation	.9821	1.8	1.8
Farm too large	.9196	1.2	1.3
Changing farm operation	.7558	3.1	3.0
Retirement, health	.9510	1.1	1.3
Other reasons	.2237	4.1	2.9
Financing Sources:			
Own funds	.4975	21.8	23.8
Banks etc.	.0399*	18.9	26.4
AADC	.0261*	38.9	27.8
FCC	.3177	8.0	9.4
FBDB	.2019	0.0	.5
Seller	.2134	7.6	4.5
Family	.5628	3.9	5.1
Other Sources	.2508	0.8	2.5

*Denotes statistically significant at .05.
**"Did" Group: Respondents did have an off-farm job in 1982.
***"Did Not" Group: Respondents did not have an off-farm job in 1982.

TABLE VI.10: 1981 Alberta Land Survey
Analysis of Agricultural Land Purchasers with an Agricultural Occupation Who Did, and Did Not Have an Off-Farm Job in 1982: Selected Frequency Distributions

VARIABLE	"DID" GROUP** Relative Frequency (%)	"DID NOT" GROUP** Relative Frequency (%)
Residence:		
Outside of Canada	0.0	0.9
In Canada but outside of Alberta	0.6	0.0
In Alberta in a city (pop. 10,000 +)	7.9	0.9
In Alberta in a town (pop. -10,000)	12.4	3.9
In Alberta on a farm	78.1	93.5
Other	1.1	0.9
Farm Business Structure:		
Individual	68.2	54.8
Partnership	20.8	16.7
Corporation	4.6	17.1
Joint venture	6.4	11.4
Canada Land Inventory:		
1	3.1	1.4
2	17.8	17.9
3	15.3	17.0
4	6.1	3.8
5	1.2	0.9
6	0.6	0.0
8, Unknown	55.8	59.0
Land Ownership:		
Individual	63.1	59.1
Family partnership	29.5	25.2
Non-family partnership	1.7	0.4
Family corporation	5.1	14.3
Non-family corporation	0.6	0.9
Most Important Reasons for Purchase:		
Expand farm	23.8	27.0
Establish own farm	41.7	27.0
Close to property	6.0	7.0
Other	4.8	10.0
Parcel previously rented:		
Yes	25.0	22.5
No	75.0	77.1
Loans from FCC, AADC, or FBDB:		
Yes	25.6	33.3
No	45.5	35.9
Did not apply	28.8	30.8
Use in 1982:		
Farmed it myself	87.4	92.6
Rented it out	5.2	3.5
Hired someone to farm it	2.9	1.3
Held it idle	0.0	0.4
Other	4.6	2.2

*"Did" Group: Respondents did have an off-farm job in 1982.
**"Did Not" Group: Respondents did not have an offfarm job in 1982.

purchasers would be consistent with the age related variables discussed in the previous paragraph. Locations of purchases by those respondents who had, and did not have, an off-farm job in 1981 before their land purchase are shown in Figure VI.3. Purchases by both groups seem to be fairly evenly spread over the province. Purchasers with off-farm jobs owned and rented fewer acres of land both before and after their purchase than did purchasers without off-farm jobs. Those with off-farm jobs may not have been able to farm as many acres because they had less time in which to farm them than those without off-farm jobs. This result may suggest that off-farm jobs were more likely to be held by beginning farmers, since they have had less time to accumulate acreage than more established farmers.

The last variable found to be significantly different between the two groups was a feature of financing. The proportion of financing received from AADC by the respondents who had off-farm jobs was greater than that received by those not working off the farm. Many of the farmers who applied to FCC and AADC said that without that financing they would not have purchased land. This was true more so for those with off-farm jobs than for those without off-farm jobs.

For the most part, frequency distributions for the off-farm, and non-off-farm, job groups were very similar. There were major differences in the residence of respondents who did and did not have an off-farm job. Those with an off-farm job resided more often in a city or a town and less often on a farm than did those without an off-farm job. This result is not surprising since most off-farm jobs would be located in cities or towns. It is important to recall that only the respondents with agricultural occupations were asked to respond to questions concerning off-farm jobs. These figures thus suggest that a significant proportion of farmers in the sample who purchased land lived in an urban center.

F. Detailed Analysis of Purchasers Who Sold Land in the Year Prior to Their Purchase

This portion of the analysis was conducted to obtain more information on agricultural land purchasers who had sold land between January 1, 1980 and December 31, 1981. The data was stratified into two groups; land purchasers who had sold land and those who had not sold land and the groups were compared using the Mann-Whitney U

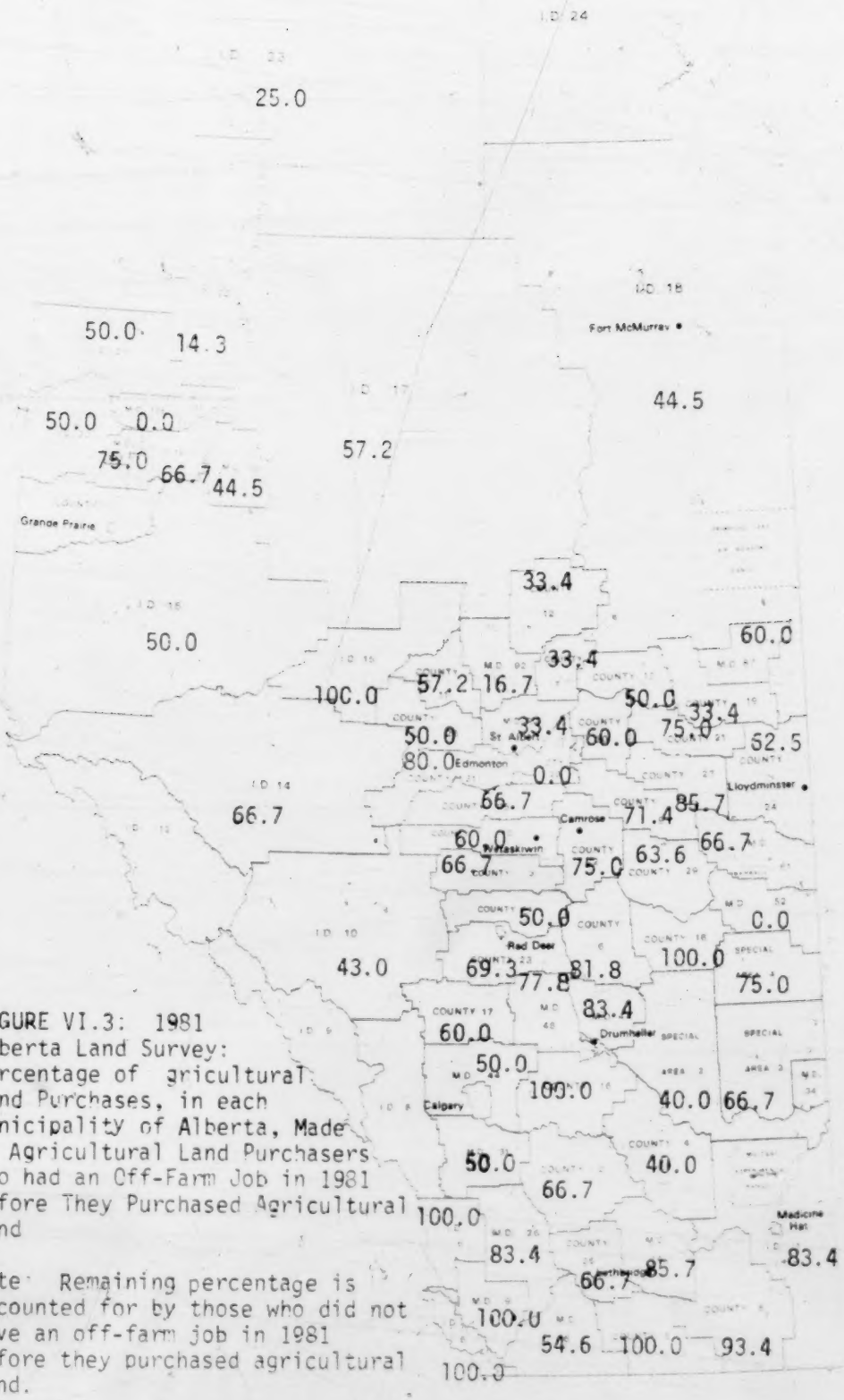

FIGURE VI.3: 1981 Alberta Land Survey: Percentage of Agricultural Land Purchases, in each Municipality of Alberta, Made by Agricultural Land Purchasers who had an Off-Farm Job in 1981 Before They Purchased Agricultural Land

Note: Remaining percentage is accounted for by those who did not have an off-farm job in 1981 before they purchased agricultural land.

test. The results of these tests are shown in Table VI.11. The frequency distributions for these two groups of individuals are shown in Table VI.12.

"Capital gains" and "tax deferral rollover" were significantly more important reasons for buying land for the group of respondents who had sold land than for the group of respondents who had not sold land. This is consistent with the feature that capital gains, in both real and nominal terms, were high for agricultural land over the 1970's. The importance of purchasing land in order to move the farm operation, for the group of respondents who had sold land, coincides with the importance of that reason for selling land and with the greater importance of "close to property" to the group that had not sold land. The respondents who had sold land did not feel "establish farm" was as important a reason for purchasing land as did the group that had not sold land. This might be because the group of respondents who had sold was composed of individuals who had been involved in farming for a longer period of time. This is confirmed by examining the differences in acreage owned, both before and after the purchase of agricultural land, by the respondents in the two groups and the differences in age of the respondents in the two groups.

In comparing the reasons selected as most important for the purchase, about 23 percent of both groups cited "expand farm". The group that had not sold land chose "establish own farm" most often as the main reason for their purchase while the group of respondents who had sold land tended to rate this reason of secondary importance. As expected, more of the group who sold land than of the group who had not sold land stated that "tax deferral rollover" and "move operation" were the most important reasons for their purchase. The location of purchases made by the groups who had and had not sold land are shown in Figure VI.4. Purchases by both groups seem to be fairly evenly spread throughout the province.

Differences in "age", "education", "years as an owner", and "years of farming" were significant for the two groups. It appears that the older more established respondents sold more land in 1981. The discussion of the frequency results of the two groups in the following paragraph is consistent with this statement.

The residence of the groups was very similar although a larger percentage of the group that had not sold land resided on farms and fewer resided in towns than did in the

TABLE VI.11: 1981 Alberta Land Survey
Analysis of Agricultural Land Purchasers Who Did, and Did Not,
Sell Agricultural Land Between January 1, 1980 and the Time of Their 1981
Alberta Agricultural Land Purchase:
Mann-Whitney U Test Results and Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: "DID NOT SELL" GROUP**	MEAN VALUE: "DID SELL" GROUP***
Age	.0000*	34.5	45.1
Education	.0059*	12.5	11.5
Years of farming	.0000*	11.0	17.1
Years as land owner	.0000*	7.4	15.0
Parcel–total acreage	.0001*	386.2	630.6
Parcel–cultivated acreage	.0002*	265.7	465.7
Parcel–market value	.0968	654.0	787.3
Parcel–distance to city	.2225	74.5	62.7
Reasons For Purchase:			
Expand farm	.2556	3.7	3.5
Increase farm income	.2339	3.8	3.6
Spread fixed costs	.7510	3.1	3.0
Use machinery	.6535	3.0	2.9
Use labor	.3276	2.8	2.6
Child entering farming	.0838	2.6	2.9
Establish own farm	.0008*	3.9	3.2
Second home	.8909	1.8	1.8
Recreation	.9009	1.5	1.5
Nonagricultural development	.9054	1.4	1.4
Investment	.4478	3.1	2.9
Inflation hedge	.4823	2.6	2.7
Capital gains	.0001*	2.0	2.8
Tax deferral rollover	.0000*	1.7	2.5
Move farm operation	.0000*	1.6	2.8
Move from city/town	.8567	2.0	1.9
No rental land	.0847	2.3	2.0
Close to property	.0110*	3.2	2.6
Close to residence	.0301*	2.4	2.5
Good price	.0140*	3.0	3.2
Other reasons	.0672	4.3	3.9

TABLE VI.11 CONTINUED: 1981 Alberta Land Survey
Analysis of Agricultural Land Purchasers Who Did, and Did Not,
Sell Agricultural Land Between January 1, 1980 and the Time of Their 1981
Alberta Agricultural Land Purchase:
Mann-Whitney U Test Results and Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: "DID NOT SELL" GROUP	MEAN VALUE: "DID SELL" GROUP
Prior acres owned	.0000*	490.2	904.9
Following acres owned	.0000*	873.3	1155.0
Prior acres rented	.4916	340.6	361.7
Following acres rented	.5358	346.5	441.1
Total acres purchased 1981	.0003*	415.6	647.2
Financing Sources:			
Own funds	.0000*	19.3	56.2
Banks etc.	.9110	24.4	19.2
AADC	.0003*	34.3	12.5
FCC	.6963	9.3	2.97
FBDB	.0044*	0.0	1.3
Seller	.7499	5.9	6.0
Family	.0808	4.7	1.9
Other Sources	.1556	2.0	0.0

*"Did Not Sell" Group: Respondents did not sell agricultural land during the time specified.
**"Did Sell" Group: Respondents did sell agricultural land during the time specified. *Denotes statistically significant at .05.

TABLE VI.12: 1981 Alberta Land Survey
Analysis of Agricultural Land Purchasers Who Did, and Did Not, Sell Agricultural Land Between
January 1, 1980 and the Time of Their 1981 Alberta Agricultural Land Purchase:
Selected Frequency Distributions

VARIABLE	"DID" SELL GROUP* Relative Frequency (%)	"DID NOT" SELL GROUP** Relative Frequency (%)
Residence:		
Outside of Canada	0.0	1.8
In Canada but outside of Alberta	1.1	0.9
In Alberta in a city (pop. 10,000 +)	7.5	8.2
In Alberta in a town (pop. -10,000)	8.1	12.7
In Alberta on a farm	80.6	74.5
Other	2.8	1.8
Occupation:		
Agricultural	89.7	88.2
Non-agricultural	10.3	11.8
Off-Farm Job, 1981:		
Yes	43.8	27.4
No	56.2	72.6
Spouse Off-Farm Job, 1981:		
Yes	22.3	22.3
No	53.2	71.3
N/A	24.5	6.4
Off-Farm Job, 1982:		
Yes	46.1	35.5
No	53.9	64.5
Spouse Off-Farm Job, 1982:		
Yes	26.6	24.5
No	53.5	70.2
N/A	19.9	5.3
Farm Business Structure:		
Individual	59.6	63.0
Partnership	20.5	10.9
Corporation	11.4	14.1
Joint venture	8.5	12.0
Canada Land Inventory:		
1	2.7	1.1
2	15.2	23.3
3	14.9	18.9
4	5.4	3.3
5	1.2	0.0
6	0.3	0.0
8, Unknown	60.4	53.3
Land Ownership:		
Individual	60.2	56.5
Family partnership	25.8	32.4
Non-family partnership	2.2	0.9
Family corporation	10.2	8.3
Non-family corporation	1.6	1.9

TABLE VI.12 CONTINUED: 1981 Alberta Land Survey
Analysis of Agricultural Land Purchasers Who Did, and Did Not, Sell Agricultural Land Between
January 1, 1980 and the Time of Their 1981 Alberta Agricultural Land Purchase:
Selected Frequency Distributions

VARIABLE	"DID" SELL GROUP Relative Frequency (%)	"DID NOT" SELL GROUP Relative Frequency (%)
Most Important Reasons for Purchase:		
Expand farm	24.0	23.0
Child entering farming	5.0	7.0
Establish own farm	37.0	14.0
Investment	6.0	2.0
Tax deferral rollover	0.0	11.0
Move operation	0.0	8.0
Close to property	5.0	8.0
Other	9.0	4.0
Parcel previously rented:		
Yes	25.5	12.3
No	74.5	87.8
Loans from FCC, AADC, or FBDB:		
Yes	28.7	39.3
No	40.3	20.2
Did not apply	30.9	40.5
Use in 1982:		
Farmed it myself	84.6	77.1
Rented it out	8.8	10.5
Hired someone to farm it	1.6	8.6
Held it idle	0.8	1.0
Other	4.1	2.9

*"Did Not Sell" Group: Respondents did not sell agricultural land during the time specified.
**"Did Sell" Group: Respondents did sell agricultural land during the time specified.

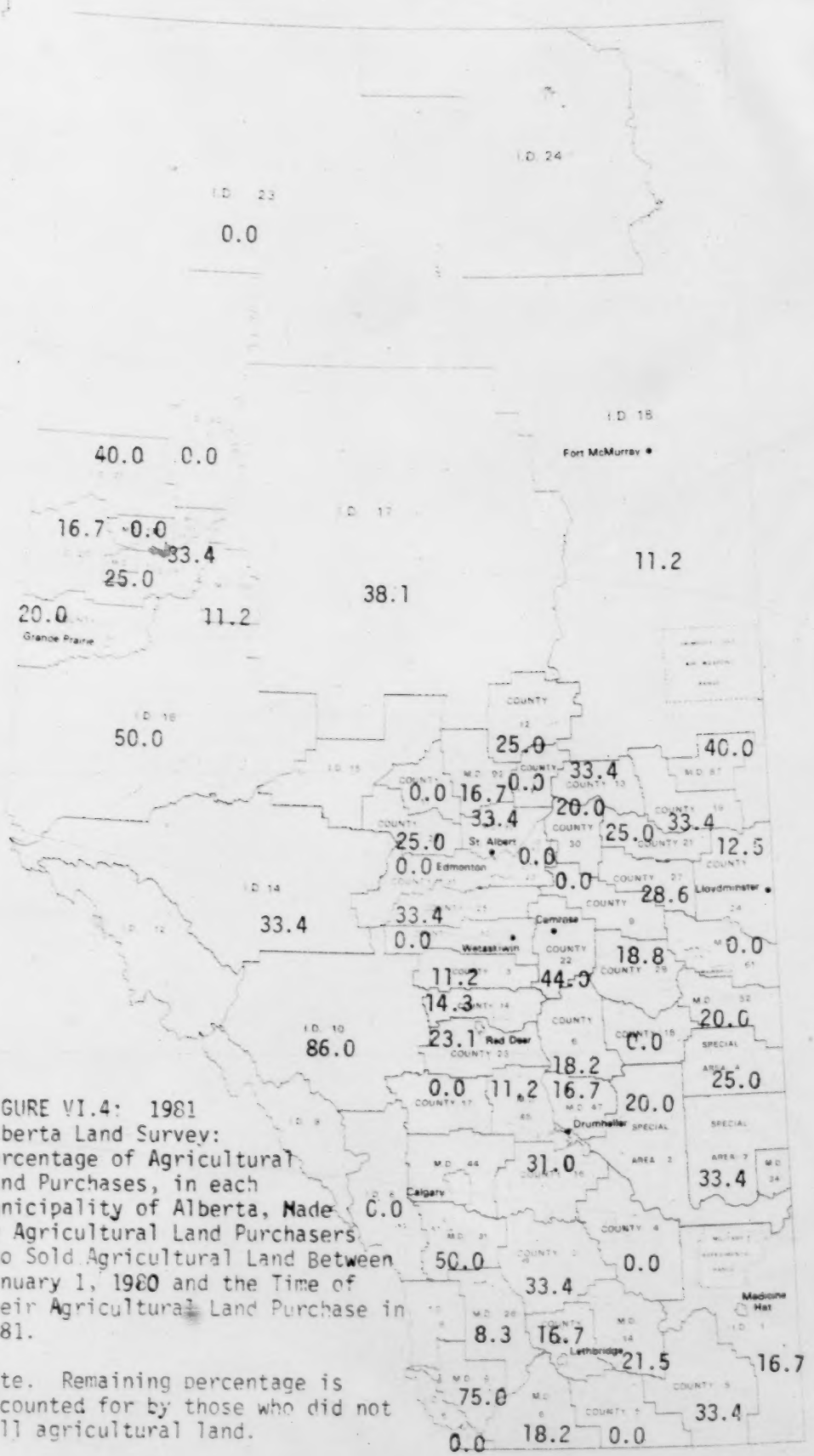

FIGURE VI.4: 1981 Alberta Land Survey: Percentage of Agricultural Land Purchases, in each Municipality of Alberta, Made by Agricultural Land Purchasers Who Sold Agricultural Land Between January 1, 1980 and the Time of Their Agricultural Land Purchase in 1981.

Note. Remaining percentage is accounted for by those who did not sell agricultural land.

group of respondents who had sold land. These results are consistent with those noted earlier for the age analysis (Table VI.2) in which the younger respondents were more likely to reside on farms than were the older respondents. Some older respondents may be moving to towns or off the farm in order to retire. This may also explain why they are selling more land.

A larger percentage of the group that had not sold land, than had sold land, had rented their purchased land before. This result is consistent with the younger age and possible need to rent land of this group. The group that had not sold land was younger and contained a higher proportion of respondents who implied a need for concessional financing in purchasing agricultural land.

G. Detailed Analysis of the Size of Land Holdings of Respondents

In this part of the analysis, the median (480 acres) and the mean (936 acres) number of acres owned by the respondents following their purchases of agricultural land in 1981 were used to divide the respondents into groups. The Mann-Whitney U test indicated that a large number of variables were significantly different between the two mean-divided groups. The results of the tests are given in Table VI.13 and the results of the frequency distributions for this analysis are given in Table VI.14. The median value of the number of acres owned by respondents following their agricultural land purchase was also used as a means of dividing the total group of respondents. A large number of variables were also significantly different between these two median groups. The results of the median groups tests are given in Table VI.15 and the results of the frequency distributions for this analysis are given in Table VI.16.

"Market value" and "distance to city" were significantly different for the groups divided by the median value of acres owned by respondents following their purchase but not for the groups of respondents divided by the mean value of acres owned. Those respondents owning less than 480 acres purchased parcels closer to the cities and this may account for the higher market values of these parcels.

Three of the reasons given for the purchases were significantly different for the groups divided by the median value of acres owned by respondents following their purchase but not for the groups of respondents divided by the mean value of acres

TABLE VI.13: 1981 Alberta Land Survey
Analysis of Two Groups of Agricultural Land Purchasers Based on the Mean Number of Acres Owned by Agricultural Land Purchasers Following Their First Purchase of Agricultural Land in Alberta in 1981
Mann-Whitney U Test Results and Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: -936 ACRES GROUP**	MEAN VALUE: 936 + ACRES GROUP***
Age	.0000*	34.0	42.1
Education	.0804	12.5	12.1
Years of farming	.0000*	8.8	19.6
Years as land owner	.0000*	5.5	16.5
Parcel–total acreage	.0000*	294.8	762.9
Parcel–cultivated acreage	.0000*	206.2	531.4
Parcel–market value	.1043	725.5	581.2
Parcel–distance to city	.2031	71.9	76.7
Reasons For Purchase:			
Expand farm	.0359*	3.6	4.0
Increase farm income	.1615	3.6	3.9
Spread fixed costs	.0001*	2.9	3.5
Use machinery	.0004*	2.8	3.4
Use labor	.0097*	2.6	2.9
Child entering farming	.0022*	2.5	3.0
Establish own farm	.0000*	4.2	2.7
Second home	.8634	1.8	1.8
Recreation	.0428*	1.5	1.4
Nonagricultural development	.3265	1.4	1.3
Investment	.5333	3.1	3.0
Inflation hedge	.9082	3.6	2.7
Capital gains	.6718	2.2	2.3
Tax deferral rollover	.3248	1.7	2.0
Move farm operation	.2372	1.8	1.7
Move from city/town	.0006*	2.2	1.6
No rental land	.3325	2.3	2.2
Close to property	.0065*	2.9	3.4
Close to residence	.7886	2.8	2.9
Good price	.4750	3.5	3.4
Other reasons	.7335	4.2	4.2

TABLE VI.13 CONTINUED: 1981 Alberta Land Survey
Analysis of Two Groups of Agricultural Land Purchasers Based on the Mean Number of Acres Owned by Agricultural Land Purchasers Following Their First Purchase of Agricultural Land in Alberta in 1981
Mann-Whitney U Test Results and Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: -936 ACRES GROUP	MEAN VALUE: 936 + ACRES GROUP
Prior acres owned	.0000*	178.2	1464.5
Following acres owned	.0000*	389.5	2194.6
Prior acres rented	.0182*	268.2	519.3
Following acres rented	.5014	288.0	536.1
Total acres purchased 1981	.0000*	301.0	814.0
Total acres sold	.0000*	71.7	234.1
Reasons for Sale:			
Property expropriated	.0685	1.4	1.1
Urban expansion	.8221	1.5	1.6
Capital gains	.2226	2.0	2.6
Move farm operation	.9010	3.6	3.6
Another job	.0977	1.4	1.2
Financial problems	.2733	2.5	2.0
Speculation	.4994	2.0	1.9
Farm too large	.2701	1.4	1.2
Changing farm operation	.8207	3.0	3.0
Retirement, health	.2808	1.3	1.2
Other reasons	.0494*	2.7	4.0
Financing Sources:			
Own funds	.2575	24.5	28.7
Banks etc.	.0000*	18.0	37.1
AADC	.0000*	39.2	7.4
FCC	.1292	7.3	9.4
FBDB	.0293*	0.0	0.7
Seller	.5175	6.3	7.3
Family	.4614	3.9	4.7
Other Sources	.0133*	0.7	4.5

*Denotes statistically significant at .05.
**-936 Acres Group: Respondents owned less than 936 acres of land following their purchase.
***936 + Acres Group: Respondents owned 936 or more acres of land following their purchase.

TABLE VI.14: 1981 Alberta Land Survey
Analysis of Two Groups of Acreages Which are Based on the Mean Number of Acres Owned by Agricultural
Agricultural Land Purchasers Following Their First Purchase of Agricultural Land in Alberta, in 1981:
Selected Frequency Distributions

VARIABLE	-936 ACRES GROUP* Relative Frequency (%)	936 + ACRES GROUP** Relative Frequency (%)
Residence:		
Outside of Canada	0.7	0.0
In Canada but outside of Alberta	1.3	0.6
In Alberta in a city (pop. 10,000 +)	7.6	7.8
In Alberta in a town (pop. -10,000)	10.2	7.2
In Alberta on a farm	77.6	81.9
Other	2.6	2.4
Occupation:		
Agricultural	89.0	89.9
Non-agricultural	11.0	10.1
Off-Farm Job, 1981:		
Yes	51.3	19.7
No	48.7	80.3
Spouse Off-Farm Job, 1981:		
Yes	25.6	16.4
No	49.2	71.9
N/A	25.2	11.6
Off-Farm Job, 1982:		
Yes	53.8	25.3
No	46.2	74.7
Spouse Off-Farm Job, 1982:		
Yes	28.7	21.4
No	50.6	69.7
N/A	20.8	9.0
Farm Business Structure:		
Individual	66.2	49.7
Partnership	22.2	11.2
Corporation	2.6	29.4
Joint venture	9.0	9.8
Canada Land Inventory:		
1	3.2	0.7
2	15.9	18.9
3	12.4	22.4
4	4.6	5.6
5	0.4	2.1
6	0.4	0.0
8, Unknown	63.3	50.3
Land Ownership:		
Individual	65.3	48.2
Family partnership	28.9	24.4
Non-family partnership	1.0	3.7
Family corporation	4.2	20.1
Non-family corporation	0.6	3.7

TABLE VI.14 CONTINUED: 1981 Alberta Land Survey
Analysis of Two Groups of Acreages Which are Based on the Mean Number of Acres Owned by Agricultural
Agricultural Land Purchasers Following Their First Purchase of Agricultural Land in Alberta, in 1981:
Selected Frequency Distributions

VARIABLE	-936 ACRES GROUP Relative Frequency (%)	936 + ACRES GROUP Relative Frequency (%)
Most Important Reasons for Purchase:		
Expand farm	23.0	25.0
Child entering farming	2.0	12.0
Establish own farm	43.0	10.0
Investment	4.0	8.0
Tax deferral rollover	1.0	6.0
Move from city/town	5.0	1.0
Close to property	3.0	10.0
Other	7.0	10.0
Parcel previously rented:		
Yes	21.5	24.4
No	78.5	75.6
Loans from FCC, AADC, or FBDB:		
Yes	29.5	33.8
No	44.0	20.6
Did not apply	26.5	45.6
Use in 1982:		
Farmed it myself	83.0	82.9
Rented it out	8.5	10.4
Hired someone to farm it	3.3	3.0
Held it idle	1.3	3.7
Other	3.9	3.7

*-936 Acres Group: Respondents owned less than 936 acres of land following their purchase.
**936 + Acres Group: Respondents owned 936 acres or more of land following their purchase.

TABLE VI.15: 1981 Alberta Land Survey
Analysis of Two Groups of Acreages Which are Based on the Median Number of Acres Owned by Agricultural Land Purchasers Following Their First Purchase of Agricultural Land in Alberta in 1981:
Mann-Whitney U Test Results and Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: -480 ACRES GROUP**	MEAN VALUE: 480 +-ACRES GROUP***
Age	.0000*	33.8	38.5
Education	.0106*	12.7	12.1
Years of farming	.0000*	7.5	15.5
Years as land owner	.0000*	4.2	12.4
Parcel–total acreage	.0000*	209.8	611.7
Parcel–cultivated acreage	.0000*	150.7	423.1
Parcel–market value	.0000*	796.6	594.2
Parcel–distance to city	.0006*	62.6	81.7
Reasons For Purchase:			
Expand farm	.0008*	3.4	3.9
Increase farm income	.0150*	3.5	3.9
Spread fixed costs	.0000*	2.7	3.4
Use machinery	.0001*	2.7	3.3
Use labor	.0320*	2.5	2.8
Child entering farming	.0091*	2.4	2.8
Establish own farm	.0000*	4.3	3.4
Second home	.4082	1.9	1.8
Recreation	.0008*	1.7	1.4
Nonagricultural development	.0842	1.4	1.3
Investment	.0089*	3.3	2.9
Inflation hedge	.5403	2.7	2.6
Capital gains	.3745	2.2	2.1
Tax deferral rollover	.1687	1.9	1.8
Move farm operation	.5395	1.8	1.8
Move from city/town	.0000*	2.4	1.8
No rental land	.0968	2.4	2.2
Close to property	.0279*	2.9	3.3
Close to residence	.6979	2.8	2.8
Good price	.4765	3.6	3.4
Other reasons	.6999	4.2	4.3

TABLE VI.15 CONTINUED: 1981 Alberta Land Survey
Analysis of Two Groups of Acreages Which are Based on the Median Number of Acres Owned by Agricultural Land Purchasers Following Their First Purchase of Agricultural Land in Alberta in 1981: Mann-Whitney U Test Results and Group Means

VARIABLE	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: -480 ACRES GROUP	MEAN VALUE: 480 + ACRES GROUP
Prior acres owned	.0000*	101.8	938.5
Following acres owned	.0000*	246.8	1474.5
Prior acres rented	.0080*	222.9	435.9
Following acres rented	.0266*	239.2	458.9
Total acres purchased 1981	.0000*	221.8	637.1
Total acres sold	.0001*	43.2	180.5
Reasons for Sale:			
Property expropriated	.2802	1.5	1.2
Urban expansion	.9256	1.5	1.5
Capital gains	.9534	2.2	2.3
Move farm operation	.1992	3.3	3.7
Another job	.0216*	1.6	1.2
Financial problems	.1432	2.8	2.1
Speculation	.4507	2.1	1.9
Farm too large	.2739	1.4	1.2
Changing farm operation	.6013	2.9	3.0
Retirement, health	.3503	1.4	1.2
Other reasons	.0407*	2.3	3.6
Financing Sources:			
Own funds	.6635	25.5	35.4
Banks etc.	.0754	20.1	34.5
AADC	.0014*	37.2	46.5
FCC	.0591	6.1	21.7
FBDB	.2103	0.0	0.0
Seller	.6013	7.0	21.5
Family	.9752	3.6	15.7
Other Sources	.0439*	0.3	4.6

*Denotes statistically significant at .05.
**-480 Acres Group: Respondents owned less than 480 acres of land following their purchase.
***480 + Acres Group: Respondents owned 480 acres or more of land following their purchase.

TABLE VI.16: 1981 Alberta Land Survey
Analysis of Two Groups of Acreages Which are Based on the Median Number of Acres Owned by Agricultural
Land Purchasers Following Their First Purchase of Agricultural Land in Alberta, in 1981:
Selected Frequency Distributions

VARIABLE	-480 ACRES GROUP* Relative Frequency (%)	480 + ACRES GROUP** Relative Frequency (%)
Residence:		
Outside of Canada	1.1	0.0
In Canada but outside of Alberta	1.6	0.7
In Alberta in a city (pop. 10,000 +)	10.5	5.7
In Alberta in a town (pop. -10,000)	11.1	7.9
In Alberta on a farm	72.6	83.6
Other	0.0	2.1
Occupation:		
Agricultural	83.1	93.6
Non-agricultural	16.9	6.4
Off-Farm Job, 1981:		
Yes	49.0	34.6
No	51.0	65.4
Spouse Off-Farm Job, 1981:		
Yes	25.7	20.3
No	44.7	64.8
N/A	29.6	11.8
Off-Farm Job, 1982:		
Yes	54.0	37.5
No	46.0	62.5
Spouse Off-Farm Job, 1982:		
Yes	30.3	23.5
No	45.8	64.3
N/A	23.9	12.2
Farm Business Structure:		
Individual	66.2	56.7
Partnership	23.6	15.1
Corporation	2.5	17.9
Joint venture	7.6	10.3
Canada Land Inventory:		
1	4.6	0.8
2	17.7	16.3
3	9.1	20.3
4	3.4	6.0
5	0.6	1.2
6	0.6	0.0
8, Unknown	64.0	55.4
Land Ownership:		
Individual	62.7	57.0
Family partnership	32.1	24.0
Non-family partnership	1.6	2.2
Family corporation	2.6	14.7
Non-family corporation	1.0	2.2

TABLE VI.16 CONTINUED: 1981 Alberta Land Survey
Analysis of Two Groups of Acreages Which are Based on the Median Number of Acres Owned by Agricultural
Land Purchasers Following Their First Purchase of Agricultural Land in Alberta, in 1981:
Selected Frequency Distributions

VARIABLE	-480 ACRES GROUP Relative Frequency (%)	480 + ACRES GROUP Relative Frequency (%)
Most Important Reasons for Purchase:		
Expand farm	18.6	27.0
Child entering farming	2.2	8.0
Establish own farm	47.0	22.0
Investment	5.5	5.0
Tax deferral rollover	0.0	4.0
Move from city/town	6.0	2.0
Close to property	2.7	8.0
Other	6.6	9.0
Parcel previously rented:		
Yes	21.9	22.6
No	78.1	77.1
Loans from FCC, AADC, or FBDB:		
Yes	31.0	30.9
No	40.5	33.1
Did not apply	28.5	36.0
Use in 1982:		
Farmed it myself	77.5	86.7
Rented it out	12.0	7.2
Hired someone to farm it	4.2	2.5
Held it idle	1.6	0.4
Other	4.7	3.2

*-480 Acres Group: Respondents owned less than 480 acres of land following their purchase.
**480 + Acres Group: Respondents owned 480 acres or more of land following their purchase.

owned by respondents following their purchase. "Increase farm income" was rated as being more important for those respondents owning more than 479 acres of farm land while "recreation" and "investment" were more important for those respondents owning less than 480 acres. It shoud be noted that about 10 percent more of the group of respondents who owned less than 479 acres than the group of respondents who owned more than 480 acres were employed in farming.

"Another job", as a reason for selling farmland, received a different response in the groups of respondents divided by the median number of acres owned than it did in the groups of respondents divided by the mean number of acres owned. This reason was more important to the group of respondents who owned less than 480 acres of land than it was to the group of respondents who owned more than 479 acres of land. Forty-nine percent of the group of respondents who owned less than 480 acres had off-farm jobs in 1981 compared to 34.6 percent for the group who owned more than 479 acres.

The remaining significantly different variables were so for both the median and the mean groups. Age and those variables which seem to be associated with age, such as education, years of farming, acreage owned and rented both before and after the purchase, and source of financing, indicated that the smaller acreages were generally owned by younger, less experienced individuals.

The group of respondents who owned less than 480 acres seemed to be somewhat less involved in farming since slightly larger percentages of this group, relative to the other three groups, lived in urban centers versus on the farm, held off-farm jobs, did not know the major CLI classification of their property, and did not farm their own property. Nonetheless, the most important reasons cited for agricultural land purchases by the groups of respondents who owned less than 480 acres were "establish farm" and "expand farm". To some extent this might reflect the younger age of this group.

On closer examination, the group of respondents who owned less than 936 acres of land generally resembled the group of respondents who owned less than 480 acres of land. It becomes apparent that this group, however, is slightly more "farming oriented" as suggested by the larger percentage of individuals residing on the farm, farming their own land, and being employed on the farm in this group (Tables 14 and 16).

In comparison to the two groups with smaller farming operations discussed above, the groups of respondents with more than 935 acres and more than 479 acres seemed to be somewhat more involved in farming. Although 34.6 percent of the group of respondents who owned greater than 479 acres had an off-farm job in 1981, only 19.7 percent of the group of respondents who owned more than 935 acres did. This seems consistent with the notion that larger farmers generally do not have off-farm jobs. The two groups of respondents with larger acreages were also more inclined to know their major CLI classification, to live on a farm, and to have agricultural occupations. Their choices of the most important reason for their purchase were fairly evenly spread over several variables. This was particularly true for the group of respondents who owned more than 935 acres of land where "close to property", "investment", and "child entering farming", were cited as more important reasons for buying land than "establish own farm" which was given as a more important reason by the smaller acreage categories of respondents.

H. Detailed Analysis of Reasons Cited by Purchasers for Buying Agricultural Land

The reasons given for purchasing agricultural land in Alberta in 1981, by various categories of individuals, have been touched upon in the preceding discussions. That discussion, however, provides little information on the relative importance of each reason cited in comparison with the other reasons within and between categories of respondents. To help analyze this feature, a weighting system was applied to the Likert scale of rating the importance of each reason for purchase. That is, for each respondent who rated "expand farm" as a very unimportant reason (ie., as 1) for purchasing land, the total score for that reason increased by one. For each person who rated this reason as fairly unimportant (ie., as 2), two points were added to the score for this reason. This continued until the weights of all five ranks were calculated and summed. This procedure was used for each of the reasons given for purchase of agricultural land. The total scores for all the reasons were added together and then the average score of the reasons was calculated. This average was assigned the value of 100. The score for each individual reason was calculated as a percentage of the average of all the reasons. By comparing this figure to the base figure of 100, a determination of the relative importance of each

reason could be achieved[94].

The results of these calculations for all of the respondents to the survey and for the specific categories of respondents, such as age, residence, occupation, sales and mean and median size, are shown in Table VI.17. The results for the total survey show that, for the respondents as a whole, "establish own farm", "increase farm income", and "expand farm" were scored highest as reasons for purchasing land in the province in 1981.

On applying this exercise to two age categories divided by the average age of the respondents, some differences became evident. The younger group gave greatest weight to "establish own farm" and allocated the secondary positions to "increase farm income", "good price", and "expand farm". The older group, on the other hand, gave greatest weight to "expand farm" and allocated the secondary positions over five reasons including "increase farm income", "good price", "child entering farming", "close to other property", and "investment".

The results of the index for the older and younger age groups were consistent with the index results for the total survey. "Establish own farm" was relatively more important for the younger than the older age group of respondents and "expand existing operation" was relatively more important for the older than the younger age groups of respondents. The importance of "investment" to the older age group may be due to older respondents' consideration, in their purchase of agricultural land, of the ability of agricultural land to hold and possibly accumulate value, making it a good investment for future retirement.

The results of the index for the agricultural land buyers who resided on Alberta farms were fairly consistent with the results of the index for the younger age group of buyers. Urban dwellers, on the other hand gave the greatest weight to "establish own farm" and gave "investment", "increase farm income", "expand farm", and "good price" as second choices.

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[94]This technique of analyzing information received from Likert scales was designed by William E. Phillips for use in a series of studies completed for the Alberta Oil Sands Environmental Research Program. (Source: William Phillips, Denis De Pape, and Leonard Ewanyk, *A Socioeconomic Evaluation of the Recreational Use of Fish and Wildlife Resources in Alberta with Particular Reference to the Athabasca Oil Sands Area*, (Edmonton, Alberta: Aquatic and Terrestrial Fauna Technical Research Committees of the Alberta Oil Sands Environmental Research Program, 1977).

TABLE VI.17: 1981 Alberta Land Survey
Analysis of Importance of Reasons for Purchasing Agricultural Land in Alberta, in 1981:
Indexed Results for Selected Categories of Agricultural Land Purchasers

REASON FOR PURCHASE	TOTAL SURVEY INDEX	AGE GROUPS* INDEX		RESIDENCE GROUPS* INDEX		OCCUPATION GROUPS* INDEX		SALES GROUPS* INDEX		MEAN SIZE GROUPS* INDEX		MEDIAN SIZE GROUPS* INDEX	
		1	2	1	2	1	2	1	2	1	2	1	2
Expand farm	140	143	137	145	127	146	98	143	137	154	142	157	136
Increase farm income	141	147	135	149	129	147	101	144	140	151	146	143	144
Spread fixed costs	116	118	115	120	107	120	85	117	187	133	116	104	106
Use machinery	115	115	116	119	107	120	78	116	116	131	116	129	107
Use labor	104	103	106	107	98	107	77	106	100	116	104	113	119
Child entering farming	102	87	120	104	94	103	97	100	112	118	115	109	95
Establish own farm	147	170	118	145	148	146	155	155	123	112	182	114	139
Second home	73	69	78	83	78	72	85	72	77	72	71	71	76
Recreation	60	57	65	56	74	56	93	60	34	53	61	59	66
Nonag. development	55	52	60	52	67	53	78	55	56	50	56	50	55
Investment	118	117	119	113	138	113	161	120	118	118	128	117	135
Inflation hedge	101	96	107	98	112	96	148	100	108	103	106	102	108
Capital gains	89	82	89	83	95	83	109	80	109	87	89	84	92
Tax deferral rollover	73	66	81	70	84	71	74	65	100	78	68	72	68
Move farm operation	71	67	76	66	73	72	70	62	108	62	75	71	72
Move from city/town	80	82	78	75	95	75	122	80	79	65	90	67	96
No rental land	92	90	84	82	78	89	75	90	80	83	93	85	95
Close to property	119	119	120	120	116	121	103	123	110	129	120	131	116
Close to residence	106	111	100	109	97	109	83	110	93	104	112	108	109
Good price	134	143	122	137	126	134	62	138	121	136	145	140	142
Other reasons	59	59	71	64	62	64	75	62	64	42	26	36	25
Comparison Value**	100	100	100	100	100	100	100	100	100	100	100	100	100

*Age groups: (1)Young (2)Old
Residence groups: (1)Rural (2)Urban
Occupation groups: (1)Agricultural (2)Non-agricultural
Sales groups: (1)No sales (2)Sales
Mean size groups: (1)936 + acres (2)- 936 acres
Median size groups: (1)480 + acres (2)- 480 acres
**These values represent the average value calculated for each category. All index values calculated may be compared with this value and with other values in other categories to obtain an idea of the relative importance of each reason.

The results of the index for the respondents who had an agricultural occupation were consistent with the results of the index for the younger group of respondents. Respondents with non-agricultural occupations, however, gave the greatest weight to "investment" and gave "establish own farm" and "inflation hedge" as second choices. These results suggest somewhat greater importance of land as an investment to nonagricultural purchasers.

The group of respondents who did not sell any land in the year prior to their purchase of land exhibited index results that were close to those results of the index for the total sample. Respondents who sold land, however, ranked "increase farm income" and "expand farm" as the most important reasons and ranked "establish own farm", "good price", and "investment" as slightly less important.

I. Detailed Analysis of Reasons Cited by Purchasers for Selling Agricultural Land

This portion of the analysis of the results of the study examined results of an index for the reasons for selling land. The results of the index were calculated in the same way as were the results of the index for the reasons for purchasing land. Table VI.18 presents the results of the index for the reasons for selling land. In terms of all the respondents who sold land, "move operation" was rated as most important but "change operation" was a relatively close second and selling to obtain "capital gains" and for "financial reasons" were both ranked third. It appears that most respondents to whom this portion of the survey applied, continued to farm after they sold land since they subsequently purchased land, but desired to change their location or the type of farming they were doing.

It may be noted here that many respondents who sold land indicated one very important reason for selling that land. The other reasons were generally considered very unimportant.

The results of the index for the younger and older and agricultural occupation groups of respondents who had sold land and made a subsequent purchase were similar to the results of the index for the total sample since "move operation" and "change operation" were ranked highest as reasons for selling land. Respondents with non-agricultural occupations ranked "move operation", "speculation", and "retirement" the highest reasons for selling land. These results give some, though fairly limited, support to the notion of

TABLE VI.18: 1981 Alberta Land Survey
Analysis of Importance of Reasons for Selling Agricultural Land Between January 1, 1980 and Time of Agricultural Land Purchase in Alberta, in 1981: Indexed Results for Selected Categories of Agricultural Land Purchasers

REASON FOR SALE	TOTAL SURVEY INDEX	AGE GROUPS* INDEX		RESIDENCE GROUPS* INDEX		OCCUPATION GROUPS* INDEX		MEAN SIZE GROUPS* INDEX		MEDIAN SIZE GROUPS* INDEX	
		1	2	1	2	1	2	1	2	1	2
Expropriation	68	56	59	49	62	68	73	49	56	60	70
Urban Expansion	83	60	90	65	85	80	100	93	57	91	70
Capital Gains	109	112	109	106	117	108	120	127	83	124	108
Move Operation	172	189	194	232	187	175	160	195	164	227	182
Another Job	69	66	54	65	59	69	73	57	52	61	70
Financial	110	115	112	98	118	115	73	106	102	113	146
Speculation	97	107	89	86	103	93	140	96	83	103	106
Farm too Big	71	66	61	65	65	71	73	63	55	72	67
Change Operation	147	161	160	195	157	151	73	170	131	53	144
Retirement or Health	74	64	71	122	58	69	113	71	57	50	73
Other	98	100	99	12	88	101	127	75	56	81	62
Comparison Value**	100	100	100	100	100	100	100	100	100	100	100

*Age groups: (1)Young (2)Old
Residence groups: (1)Rural (2)Urban
Occupation groups: (1)Agricultural (2)Non-agricultural
Mean size groups: (1)936 + acres (2)- 936 acres
Median size groups: (1)480 + acres (2)- 480 acres
**These values represent the average value calculated for each category. All index values calculated may be compared with this value and with other values in other categories to obtain an idea of the relative importance of each reason.

the "ripple effect". The importance of such reasons for selling as "move operation" and "change operation" suggest that examining the responses, in terms of location, of respondents who sold and subsequently purchased agricultural land may give further light on this issue.

J. Detailed Analysis of Sources of Credit Used to Finance an Agricultural Land Purchase

To obtain a better understanding of the sources of credit which were commonly used to purchase agricultural land in 1981, a more thorough examination of these sources was carried out. The Mann-Whitney U test was employed to determine if significant differences existed in the percentage of financing received from the sources of credit. Respondents who received financing from a particular source of credit were compared with respondents who did not receive funding from that source. Respondents who received financing from FBDB and "other" sources were not included in this analysis because of their small number.

The results of the Mann-Whitney U test for the sources of financing used by the respondents to purchase their land are shown in Table VI.19. These results may be interpreted according to the following example. All respondents either did or did not receive financing from a bank. Of those who did not receive financing from this source, the average percentage of financing received from AADC was 48.6. Likewise, of those who did receive financing from the bank, the average percentage of financing received from AADC was only 1.29. The difference in the percentage of financing received from AADC by those who did and did not receive funding from a bank is significant at the .05 level.

According to Table VI.19, the use of AADC financing was the most popular source of credit, followed closely by bank financing and purchaser financing. It is possible that AADC is catering to the younger, beginning farmers and the banks and the purchasers' own funds are generally supplying the credit for the older, more established farmers and the non-farmers in the sample. These results would be consistent with those found in the detailed analysis of the age of respondents (Table VI.1).

TABLE VI.19: 1981 Alberta Land Survey
Analysis of Sources of Financing Used, and Not Used, to Purchase Agricultural Land in Alberta, in 1981:
Mann-Whitney U Test Results and Group Means for Selected Variables

SOURCES AND SELECTED VARIABLES	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: "DID NOT USE" THIS SOURCE**	MEAN VALUE: "DID USE" THIS SOURCE***
Own Funds:			
Own funds	.0000*	0.0	49.2
Bank	.3332	24.3	23.1
AADC	.0000*	48.2	13.3
FCC	.0290*	12.8	3.6
Seller	.1413	5.9	6.5
Family	.3078	6.6	2.3
Banks:			
Own funds	.4881	29.0	22.1
Bank	.0000*	0.0	69.8
AADC	.0000*	43.6	1.29
FCC	.0002*	11.3	1.0
Seller	.2358	7.9	3.1
Family	.1142	5.4	2.2
AADC:			
Own funds	.0000*	36.8	5.7
Bank	.0000*	35.0	0.9
AADC	.0000*	0.0	90.2
FCC	.0175*	10.5	2.0
Seller	.0001*	8.9	0.8
Family	.1343	5.8	1.2
FCC:			
Own funds	.0754	27.8	18.9
Bank	.0001*	26.5	4.3
AADC	.0035*	31.9	10.8
FCC	.0000*	0.0	61.8
Seller	.2258	6.7	3.4
Family	.1702	4.8	3.5
Seller:			
Own funds	.7730	27.5	20.2
Bank	.1264	24.8	13.8
AADC	.0001*	32.3	3.5
FCC	.1920	8.5	1.9
Seller	.0000*	0.0	59.1
Family	.5934	4.6	1.5
Family:			
Own funds	.0430*	27.9	13.0
Bank	.0498*	24.9	10.4
AADC	.0500*	30.4	17.2
FCC	.1877	8.2	3.9
Seller	.6310	6.4	4.9
Family	.0000*	0.0	49.2

SOURCES AND SELECTED VARIABLES	U TEST: LEVEL OF SIGNIFICANCE	MEAN VALUE: "DID NOT USE" THIS SOURCE	MEAN VALUE "DID USE" THIS SOURCE
Own Funds:			
Age	.0000*	32.4	40.0
Years of farming	.0097*	10.2	13.4
Years as land owner	.0032*	6.85	10.3
Parcel–total acreage	.5166	413.2	429.4
Parcel–market value	.2903	600.7	757.4
Prior acres owned	.0031*	439.0	673
Following acres owned	.5788	831.4	1020.1
Banks:			
Age	.0000*	34.3	40.3
Years of farming	.0000*	9.8	16.0
Years as land owner	.0000*	6.7	12.1
Parcel–total acreage	.0332*	408.6	448.4
Parcel–market value	.2312	672.3	707.5
Prior acres owned	.0000*	371.6	938.9
Following acres owned	.0024*	755.5	1275.9
AADC:			
Age	.0000*	40.9	27.2
Years of farming	.0000*	15.0	6.1
Years as land owner	.0000*	1.6	2.5
Parcel–total acreage	.0002*	410.6	445.3
Parcel–market value	.2121	726.3	598.1
Prior acres owned	.0000*	798.9	83.2
Following acres owned	.0000*	1148.3	494.2
FCC:			
Age	.8286	36.5	35.5
Years of farming	.4546	11.7	12.6
Years as land owner	.2681	8.6	8.7
Parcel–total acreage	.0787	417.7	451.3
Parcel–market value	.2257	701.9	569.0
Prior acres owned	.4118	590.1	396.7
Following acres owned	.0646	956.7	769.7
Seller:			
Age	.0325*	36.1	38.9
Years of farming	.3142	11.8	12.0
Years as land owner	.1031	8.5	9.3
Parcel–total acreage	.1581	430.3	352.6
Parcel–market value	.0142*	629.2	1148.3
Prior acres owned	.1757	546.0	718.1
Following acres owned	.7579	931.1	943.6
Family:			
Age	.2900	36.6	33.8
Years of farming	.1226	12.1	8.9
Years as land owner*	.0240	8.9	5.3
Parcel–total acreage	.1967	405.9	588.2
Parcel–market value	.2380	684.5	683.6
Prior acres owned	.1629	575.7	449.3
Following acres owned	.9258	927.7	983.7

*Denotes statistically significant at .05.
**"Did Not Use" Group: Respondents did not receive funding from the specified source.
***"Did Use" Group: Respondents did receive funding from the specified source.

The six variables in the second part of this analysis were used to help determine if certain individuals were more likely to use certain kinds of financing. "Market value" was also used to help determine if financing is associated with the quality of land purchased. "Market value" was significantly different for respondents who had and did not have seller financing. Those respondents with financing from the seller appear to have purchased land with higher market values than those without financing from the seller. Financing from the seller, according to Johnson and Hanson, may have more attractive financing provisions relative to more conventional financing for the purchaser and this may encourage somewhat higher bid prices[95].

Analysis of the group of purchasers who had made a downpayment on their purchase indicated they tended to be older and more experienced than those who had not made a downpayment. Those with bank financing also fell into this category. Older individuals have had more time to collect savings and consequently provide a down payment. They are also less likely to qualify for FCC and AADC funding but they are more likely to have refined their management skills, to have other securable land, and to have had some previous credit experience. These features make them a more likely acceptable credit risk for the commercial financial institutions.

Those respondents with AADC financing, on the other hand were generally younger and less experienced. The tendency of these respondents to purchase more acres in their first parcel than those without AADC financing might be partly because they were receiving concessional financing. AADCs attraction to younger farmers is probably due to their beginning farmer loan progran and the value of the concessional terms and conditions which apply to it.

According to statistics published by FCC on the characteristics of FCC borrowers, loans to assist persons under 35 years of age accounted for the greatest percentage of the Corporation's lending between 1978 and 1980. Over those three years, loans to this group of borrowers remained constant at 72 percent of loans approved by FCC[96]. According to this study, however, age as not a significant factor for those who did and did not borrow from FCC as would have been expected, given the above statements. The FCC

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[95]Johnson and Hanson, p. 18.
[96]Farm Credit Corporation, *Statistics 1980 Federal Farm Credit*, (Farm Credit Corporation, 1980), p. 34.

statistics, however, are for Canada as a whole while the survey results are for Alberta. AADC's popularity, after it's change in lending policies, with beginning farmers may have influenced the FCC statistics after 1980 as well.

K. An Examination of the "Ripple Effect"

To obtain a fuller perspective on individuals who sold land between January 1, 1980 and the time of their land purchase in 1981, a map was constructed to show the municipalities where sales and subsequent purchases were made. This map is given in Figure VI.20. About 26 percent (or 22) of the respondents who both sold and bought agricultural land, did so across at least one municipality. About 54 percent (or 46) of the respondents in this examination sold and bought land in the same municipality. Finally, about 21 percent (or 18) of the respondents sold and bought land in adjoining municipalities.

There is a suggestion of a northward movement between sales and subsequent purchases in Figure VI.5. Comparatively few respondents moved south. There also appears to have been a relatively large amount of activity in the Camrose area, especially in terms of purchases. A total of 7 purchases were made in the County of Camrose after a sale in some other municipality. The respondents indicated they felt "move operation", "good price", and the economic related reasons like "investment", "inflation hedge", "capital gains", and "tax deferral rollover" were important reasons for their agricultural land purchases. In terms of reasons for selling land, these respondents indicated "move operation" and "change operation" as the most important reasons, followed by "urban expansion", " capital gains" and "speculation". A majority of these respondents farmed the land they purchased themselves, two of them rented it to someone else to farm and one individual hired someone to farm it for him. All but one of the seven respondents (who resided in a city) resided on a farm in Alberta. Correspondingly, one of the seven respondents indicated he was retired while the remaining respondents were employed in agriculture. This subset of respondents from the County of Camrose appeared to be actively engaged in farming and sold and purchased land in order to move their farming operation while at the same time deferring capital gains taxes on the land sold by buying other similar land within the specified time period.

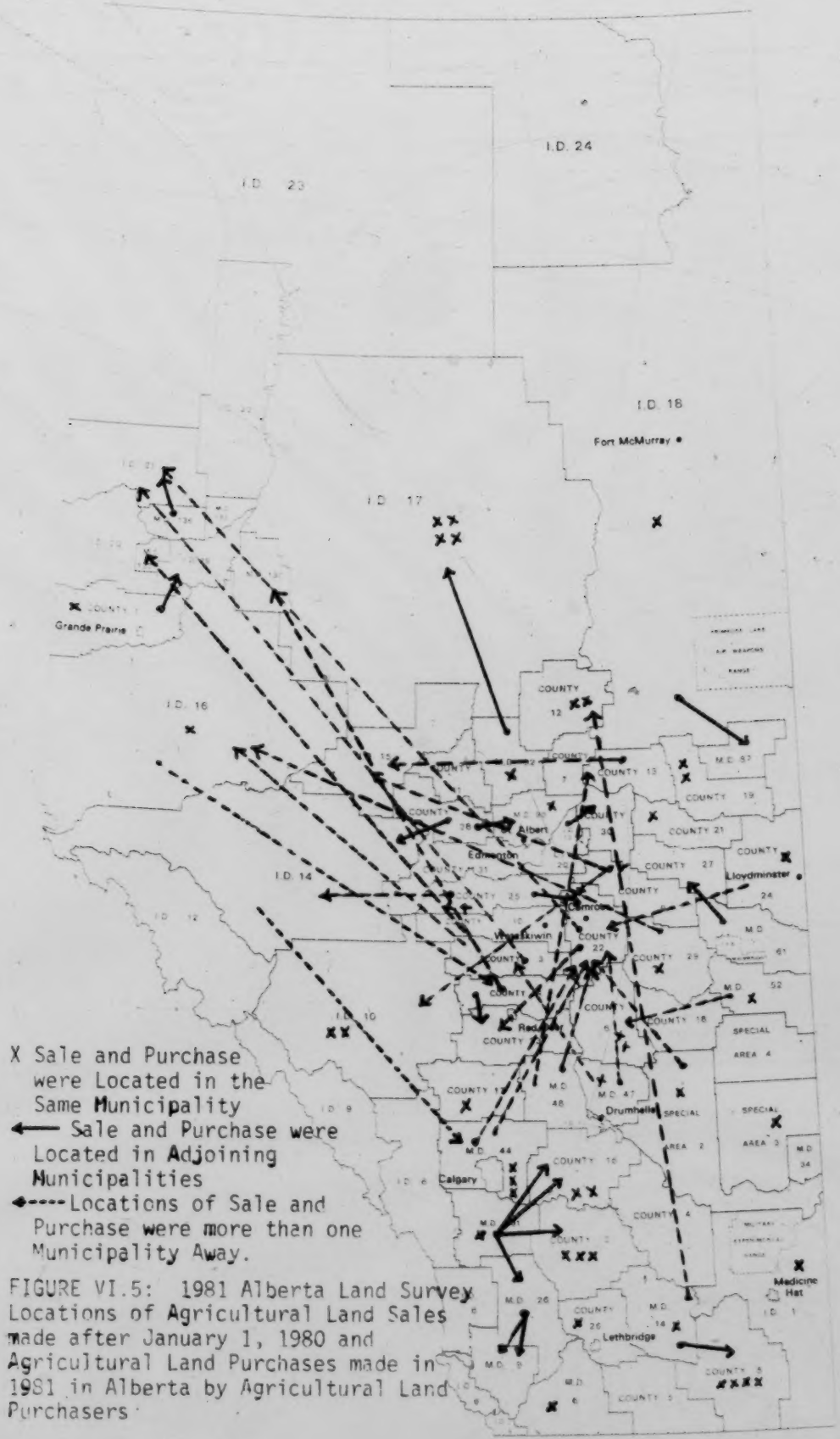

FIGURE VI.5: 1981 Alberta Land Survey Locations of Agricultural Land Sales made after January 1, 1980 and Agricultural Land Purchases made in 1981 in Alberta by Agricultural Land Purchasers

To obtain a fuller picture of those individuals who sold land in one municipality and purchased land in a distant municipality, this group was compared to a group composed of those who sold and bought agricultural land within the same municipality or in adjoining municipalities. This comparison was accomplished with a t test for differences in means. The null hypothesis for this test is the same as for the Mann-Whitney U test: that there is no difference along selected variables for the two groups. The t test employs means and standard deviations of the two groups to obtain the calculated value which the critical test value is compared to. The critical value for a level of significance of .05 and 80 degrees of freedom is 1.67. If the calculated value is greater than +1.67 or less than -1.67, then the null hypothesis is rejected and the two groups are probably different in terms of the variable selected for comparison. Table VI.20 shows the results of the t test for those variables in the survey which were at least ordinal in measurement.

The results of this exercise show quite clearly that the respondents with sales and distant purchases included significantly younger individuals whose prime reasons for selling land in one area and buying in another were different from the respondents with sales and closer purchases. The respondents with sales and distant purchases wished to change and/or move their operation and they wanted to move away from the city. Very few respondents (2 and 8, respectively), cited expropriation or urban expansion as important or very important reasons for selling agricultural land. The significance of cited reasons for purchase and sale such as a good purchase price and a desire to move or change operations, and the insignificance of such reasons as expropriation and urban expansion suggest that the survey results do not support the general notion of the "ripple effect".

TABLE VI.20: 1981 Alberta Land Survey
Analysis of Two Groups of Alberta Land Purchasers Who Sold Agricultural Land After December 31, 1979 and Also Made a Purchase of Agricultural Land in Alberta in 1981: T Test for Difference in Means and Group Means

VARIABLE	CALCULATED T VALUE	MEAN VALUE "FURTHER" GROUP**	MEAN VALUE "CLOSER" GROUP***
Age	2.61*	40.0	47.5
Years of farming	.86	15.4	17.4
Years as land owner	1.47	12.5	15.7
Parcel–total acreage	−1.25	699.4	531.2
Parcel–cultivated acreage	−.54	493.6	427.7
Parcel–market value 1981	.36	734.6	798.9
Parcel–distance to city	.17	61.2	62.8
Reasons for Purchase:			
Expand farm	−.279	3.6	3.5
Increase farm income	−.246	3.7	3.6
Spread fixed costs	−1.39	3.4	2.9
Use machinery	−.65	3.1	2.9
Use labor	.42	2.5	2.7
Child enter farming	−1.18	3.4	2.8
Establish farm	−.498	3.4	3.1
Second home	1.25	1.6	1.9
Recreation	−.19	1.5	1.4
Nonag. development	.41	1.3	1.4
Investment	.73	2.7	3.0
Inflation hedge	.537	2.5	2.5
Capital gains	.0546	2.8	2.8
Tax deferral rollover	−1.35	2.8	2.8
Move farm operation	−3.17*	3.8	2.5
Move from city/town	2.09*	2.5	1.7
No rental land	−1.12	2.3	1.9
Close to property	1.92*	2.1	3.0
Close to residence	.31	2.5	2.6
Good price	−1.88*	3.7	3.1
Other	−1.44	4.3	3.7

TABLE VI.20 CONTINUED: 1981 Alberta Land Survey
Analysis of Two Groups of Alberta Land Purchasers Who Sold Agricultural Land
After December 31, 1979 and Also Made a Purchase of Agricultural Land in Alberta in 1981:
T Test for Difference in Means and Group Means

VARIABLE	CALCULATED T VALUE	MEAN VALUE: "FURTHER" GROUP	MEAN VALUE "CLOSER" GROUP
Prior acres owned	.108	940.1	969.4
Following acres owned	.45	1061.7	1154.4
Prior acres rented	1.21	254.7	456.1
Following acres rented	.87	309.5	466.7
Total acres sold	.0158	615.7	618.9
Reasons for Sale:			
Property expropriated	1.05	1.4	1.2
Urban expansion	.008	1.6	1.6
Capital gains	-.869	2.5	2.5
Move farm operation	-3.07*	4.4	3.3
Another job	-.468	1.3	1.3
Financial problems	1.01	2.0	2.5
Speculation	0.60	2.0	2.0
Farm too large	-.989	1.5	1.2
Changing farm operation	-2.64*	3.7	2.6
Retirement, health	.397	1.3	1.4
Other	.79	3.4	2.8
Financing Sources:			
Own funds	.119	55.4	56.6
Banks	.288	18.4	20.7
AADC	.38	10.3	12.9
FCC	.20	5.7	.5
FBDB	.11	0.0	1.7
Seller	-.816	10.1	4.7
Family	1.30	0.0	2.7
Other	-.1	0.0	0.0

*Denotes statistically significant at .05.
**Further Group: Respondents purchased land further away than one municipality from where they sold.
***Closer Group: Respondents purchased land within one municipality of where they sold land.

VII. SUMMARY AND CONCLUSIONS OF THE RESULTS OF THE STUDY

This study has, in the preceding chapters, disclosed information on the nature of participants in the 1981 Alberta agricultural land market; outlined the nature of purchasers stated buying motivations; assessed some of the institutional and economic factors affecting the market for agricultural land in Alberta; and checked the accuracy of published information on the agricultural land market.

This chapter provides a brief summary of the results of the 1981 Alberta Land Survey and, at the same time discusses some of the conclusions which arose from those results. This discussion will include some implications and limitations of the study, as well as some recommendations for further studies on agricultural land markets. Appendix D provides a list of detailed comments, suggestions and recommendations that were provided by the respondents to the survey.

The total response rate of the 1981 Alberta Land Survey was 51.5 percent or 948 acceptable responses from the 1,890 individuals who were chosen, by a simple random sampling process, from the 1981 Alberta Land Title Changes listing to be part of the survey. Approximately half of these respondents were involved in a land transfer for the purpose of purchasing agricultural land in Alberta in 1981. The remaining respondents were involved in land title changes for such reasons as family land transfers, transfers to the executor of an estate and transfers because of a name change. The remainder of the results of the survey referred only to those respondents who indicated that they had purchased agricultural land in Alberta in 1981. Although the questionnaire for this survey did not do so, it may have been beneficial to obtain more information from the respondents who did not purchase agricultural land. This additional information may have been valuable for comparing respondents who had made a new agricultural land purchase with those who owned land prior to 1981.

In the analysis of the results of the survey, two predominant characteristics of purchasers emerged. The first characteristic concerned the low average age of respondents relative to that of 1981 Alberta census-farm operators. The second characteristic concerned the occupations of respondents which were largely agricultural in nature.

The average age of respondents who purchased agricultural land was about 37 years. This figure is low in comparison to the average age of 46 years of Alberta census farm operators in 1981. The average number of years of education completed by respondents was 12.4 and this figure was high relative to the distribution of years of education obtained by Alberta census farm operators. Approximately 79 percent of the respondents to the survey resided on a farm in Alberta. Over 91 percent of Alberta census farm operators, however, resided on the farm operated. About 19 percent of the respondents to the survey resided in cities and towns in Alberta. The balance of the respondents resided outside of Alberta. The main occupation of the respondents was "agriculture" with a relative frequency of 87 percent. About 32 percent of the respondents who did not cite themselves as farmers actually farmed their land themselves in 1982. The occupations of those not employed in agriculture were primarily in education, health, or welfare and construction, communications, or transportation. About 28 percent of the respondents indicated that they had more than one occupation and over 96 percent of these respondents were occupied in agriculture. Approximatedly 40 percent of the respondents who had an agricultural occupation indicated that they had an off-farm job in 1981 before they purchased agricultural land. About 28 percent of the spouses of the respondents who had an agricultural occupation, also had an off-farm job in 1981 before their land purchase. About 3 percent more of both respondents with an agricultural occupation and their spouses had an off-farm job in 1982 than had been the case in 1981 before their land purchase. In comparison, Statistics Canada indicated that about 41.5 percent of census-farm operators in Alberta in 1981 reported some days of off-farm work.

The occurrence of individual business structures was low (60.2 percent) in comparison to that reported by Statistics Canada for 1981 Alberta Census farm operators (89 percent). The relatively new type of business structure of "joint venture" showed some popularity as 9.3 percent of respondents indicated that this typified their farm business structure.

Respondents had been farming land for an average of 12.4 years. In contrast the average length of time farm operators had been self-employed, according to the 1980 Farm Credit Survey, was 24 years.

Respondents purchased an average of 437 acres in their first parcel purchased in 1981. About 307 acres, on average, of the parcels were cultivated. As is often the case in designing a questionnaire, problems in the interpretation of some questions did not come to light until after the survey was completed. Rather than providing information on purchased land involving one land title, as had been expected, many respondents seemed to provide information on purchased land involving more than one land title. The overall effect of the difference in interpretation is expected to be minimal since respondents still seemed, in their responses to other questions, to be referring to their first 1981 agricultural land purchase.

The average market value of the purchased acreage was $682 per acre and this figure was high in comparison to the Alberta average agriculture real estate value as published by Alberta Agriculture, for 1981, of $443.95. Adjustments of both figures, according to specific definitions and guidelines, brought the two values within $30 per acre of each other. To provide a more accurate value of agricultural land in Alberta, it is suggested that the annual Alberta Agriculture study on rural real estate values readjust the upper limit assurance fund value of $1,500 per acre in its definition of agricultural land to some higher figure in order to accommodate the large changes in land prices which occurred until mid-1981. The $1,500 limit appears to have some downward bias on the average land values reported in the *Agricultural Real Estate Value* publication. It is also suggested that a periodic study to give a more accurate record of average land values be considered. This could involve a sample survey of transfers to check current market values. Alternately, continued periodic checks involving opinions of value of local municipal assessors could be undertaken in order to obtain more accurate information on rural land values and to provide better monitoring of the accuracy of assurance fund values.

Approximately 60 percent of respondents did not know the major CLI value of the land they purchased in 1981. The average distance from the parcels purchased by the respondents to the nearest city was 72 miles. The Land Title Changes listing from which the sample was drawn could have been used to provide more exact information on the location of purchases, the size of parcels that were purchased and the CLI classifications of property in the study. However, because of guarantees of confidentiality and

anonymity to the respondents of the survey, questionnaires were not identified so that the available information from the list could be used. This information would have been particularly valuable in providing the major CLI classification of the agricultural land purchased by the respondents.

The most popular reasons given for purchasing land in 1981 by respondents were "expand existing farm operation", "establish own farm", "closeness to other property", "investment", and "help child enter farming". A large number of respondents indicated they had "other" reasons for buying land and these were often associated with the purchasers' personal lives.

The respondents owned, on average, 585 acres of land before their 1981 purchase and 937.3 acres of land after the purchase. This last figure was fairly consistent with the average size of 1981 Alberta census farms which was 813.3 acres. The respondents rented, on average, 338 acres of land before their land purchase in 1981 and 695.8 acres of land after their purchase. About 22 percent of the respondents indicated that they had previously rented the land they purchased in 1981.

A large proportion (79 percent) of the land-purchaser respondents did not sell any land in 1981. The average number of acres sold by those who did sell land was 625.4 and they indicated that, in general, they had sold in order to move or change their farm operations. It is suggested that further research be directed toward the determination of the general characteristics of all sellers of agricultural land in the agricultural land market in Alberta. The information provided by the 1981 Alberta Land Survey on sales of agricultural land is restricted to those individuals who made a subsequent purchase of land and this information may not be representative of all the sellers in the market.

A large proportion (83 percent) of respondents to the survey farmed their property themselves in 1982. The remaining respondents hired someone to farm the land for them, rented it out, or held it idle.

A relatively large number of respondents got all of their funding for their land purchase from one source rather than from several sources. Funding from AADC and the banks was common but many individuals provided some downpayment towards the purchase of their land. Financing from FCC, FBDB, the family and the seller was far less common than the above sources for the respondents.

After examining the frequency distributions of the variables in the study, the respondents were divided into two groups for the categories of age (divided by the mean age of 37 years), residence (rural versus urban), and occupation (agricultural versus non-agricultural). The respondents were later categorized by the size of the farm they owned after their purchase of agricultural land in 1981 (divided by the mean (936 acres) and the median (480 acres) number of acres owned; by the type of financing they used to purchase their land; by whether they had off-farm jobs (divided by yes and no); and by whether they had sold land sometime in 1980 or 1981 before they purchased land (divided by yes and no). The two groups in each category were compared on the basis of Mann-Whitney U tests and frequency distributions and the differences between the groups noted.

The younger age group (36 years or less) of purchasers resided primarily on farms and their occupations were predominantly agricultural. The older age group (37 years and older) of purchasers resided primarily on the farm as well, but they were more likely, relatively, to reside in urban centers. Their occupations were predominantly agricultural but they were more likely, relatively, to have non-agricultural occupations. Younger purchasers tended to have more years of education. More of them had off-farm jobs. The younger purchasers had fewer years of farming experience. They owned less land and rented more land than did the older respondents. More of the younger respondents relied on concessional financing institutions like AADC for the funding of their land purchase. Older individuals tended to have less education and more years of farming experience, more owned land and less rented land. They also had sold more land and tended to provide relatively larger downpayments towards the purchase of their land. The reasons given by the younger purchasers for their purchase of land tended to emphasize that they had paid a good price for it and they wanted to establish their own farm. The older purchasers tended to place more emphasis on their children, the expansion of their farms, the value of land as a hedge against inflation and the benefits of being able to defer tax when land is rolled over, in the purchase of land.

Respondents to the survey who resided on farms were almost entirely employed in agriculture and relatively few of them had off-farm jobs. Because a high proportion of these respondents were farming, this group had more experience in farming. They had

fewer years of education. They owned and rented more land than respondents who resided in cities or towns. Those respondents with agricultural occupations were more likely, relatively, to farm their purchased land themselves and to obtain financing from concessional institutions. In terms of reasons given for purchasing land, the rural residents tended to buy land because there was no land to rent and because they wanted to increase their farm income. Urban residents tended to place more emphasis on buying land for recreation, for non-agricultural development, and in order to move from the city.

Respondents with agricultural occupations were generally younger; less educated; more experienced in farming; owned, rented, and sold more land; and obtained more financing from concessional financing institutions but contributed less of their own funds towards the purchase of agricultural land than did respondents with non-agricultural occupations. The respondents with agricultural occupations tended to be more concerned with expanding their farms, increasing their incomes, cutting costs, and finding land close to their property or residence. Respondents with non-agricultural occupations tended to be more concerned with purchasing land for recreational, investment, and non-agricultural development reasons.

Individuals who had off-farm jobs were generally younger, better educated, less experienced in farming, purchased fewer acres of land in 1981, owned and rented less land, and they tended to obtain financing from AADC and were more likely to live in cities or towns than those respondents who did not have off-farm jobs. Those with off-farm jobs tended to emphasize the desire to establish their own farms and to move from the cities or towns. Those respondents without off-farm jobs placed more emphasis on reducing their costs of farming.

Those respondents who sold land in 1980 or in 1981 before they purchased agricultural land, were older, had fewer years of education, were more experienced in farming, and owned more land than did those respondents who had not sold land. The reasons they gave for purchasing land gave more emphasis on the desire to make capital gains and to take advantage of tax deferral rollover provisions. Those respondents who had not sold land, bought land to become established in farming and to take advantage of property that was close to other owned property. They also received a large percentage of their financing from AADC.

The respondents who owned relatively large amounts of land after their 1981 purchase tended to be older and more experienced in farming. They tended to own, rent and sell more acres of land and obtain more of their funding from the banks than did the respondents who owned relatively small amounts of land. In their purchase of land, they placed more emphasis on "expand their farm operations" and to obtain property close to property already owned. The respondents who owned less land tended to emphasize "establishing their own farm" and also to emphasize that they could move away from the cities or towns they were more likely, relatively, to be living in. These individuals also obtained more financing from AADC.

An analysis of the sources of credit employed by the respondents leads to the following conclusions. AADC financing tended to be obtained by younger, less experienced farmers. Older, more experienced farmers tended to obtain their financing from banks and more traditional sources of credit.

A further analysis of respondents' stated reasons for purchasing and selling land was also undertaken. According to the index computed for the analysis of the reasons for buying agricultural land, "expand farm", "increase farm income", "establish own farm", and "good price", were consistently the top four reasons given by all the groups described above for buying land. The older age group of respondents, the respondents who did not sell any land, and the respondents who owned less than 936 acres of land, felt more strongly about buying property "close to other property" owned by them than about buying property to "establish their own farm". The group of respondents who resided in cities or towns felt that purchasing land as an investment was more important than purchasing land because it had a good price. The group of respondents who did not have an agricultural occupation felt that "establish own farm" was a good reason for purchasing land but it was a less important reason than "investment", "inflation hedge", and "move from city/town".

According to the index computed to analyze the reasons for selling agricultural land, "move operation" and "change operation" were consistently the top two reasons for selling land given by all groups described above. The group of respondents who did not have an agricultural occupation felt that "speculation" was a relatively more important reason for their sale of land than was "change operation".

The above results, while leading to the conclusion that the two groups in each category had differences, also indicates that they were very similar. The age groups did not differ, for example, in total number of acres, and number of cultivated acres purchased and both groups exhibited similar characteristics in terms of farm business structure and land ownership. The residence groups differed little in age and years of farming experience, for example. Most of the groups exhibited more similarities than differences and this was especially noticeable in the analysis of the results of the index for the reasons for purchasing and selling land. Only in the occupation category, where respondents were divided into groups of respondents with or without an agricultural occupation, did a relatively large number of differences appear between the groups. It may be concluded that the respondents without agricultural occupations are relatively more likely to exhibit the characteristics normally attributed to speculators such as an interest in land as an investment and a hedge against inflation and purchasing agricultural land for recreation and non-agricultural development reasons. A more important consideration, perhaps, is that all of the groups of respondents had individuals within them that did not conform to the overall average or norm of the group. That is, for example, there were purchasers in the younger group of respondents who purchased land as an investment and who hired some one to farm it for them.

Despite the above conclusions, many of the results of the survey hinted at the relatively young age of the respondents. Years of education, years of farming experience, reasons for purchasing land, number of acres owned and rented, and source of financing seemed to indicate the relatively young age of the agricultural land purchasers.

The major impact on the market seemed to be by respondents who were farming or ranching. It may be concluded that while this group of individuals may be concerned about the effect on the agricultural land market of "speculators", "investors", and "foreigners", they themselves probably have the greatest influence.

Hutterite colonies and non-residents of Alberta are often blamed for influencing agricultural land markets. The general public may not be aware, however, of the lack of evidence pointing to non-residents or Hutterite colonies as major influences in the agricultural land market in Alberta. While Hutterite colonies and non-residents did buy land in Alberta in 1981, the small number of them in the sample (8 and 41, respectively) did not

suggest that they had a substantial effect on the market for agricultural land. By augmenting demand, they may have had some impact on very local markets but their overall effect on the agricultural land market is concluded to have been minimal.

The notion of the "ripple effect" was examined in the study. Of the individuals who purchased land in the study, about 21 percent of them had made a sale of agricultural land in 1980 or in 1981 prior to their purchase of land. About 26 percent (or 22) of the respondents who sold and bought agricultural land did so across at least one municipality. These individuals tended to be younger than the other respondents who had sold land. They were also more likely to buy land in order to "move farm operation", "move from city/town", and because of a "good purchase price". They were more likely to sell land to "move farm operation" and "change farm operation". Few respondents (2 and 8, respectively) indicated that expropriation or urban expansion were important reasons for selling their land. These results, combined with the relative importance of such reasons for selling and buying agricultural land as a desire to move or change the farm operation, led to the conclusion that the survey results did not support the general notion of the "ripple effect".

As a final comment in this study, it is recommended that a second survey be conducted in approximately five years to determine how changes in the agricultural land market since the 1981 survey have affected the nature of the characteristics of buyers of agricultural land and the motives which influence their decision to buy. The results of such a second survey, when compared to those of the 1981 Alberta land survey could also provide valuable information on how motives for buying land change as situations change.

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Appendix A

DEPARTMENT OF RURAL ECONOMY
Faculty of Agriculture and Forestry
The University of Alberta
Edmonton, Alberta T6G 2H1
Phone: 403 432-4225

December 8, 1982

Dear Respondent,

Substantial changes in prices of agricultural land have been evident over the past decade. Problems may have arisen from the escalation of land prices which occurred until mid-1981. For example, lack of available financing, high interest costs, and reduced cash flow may have restricted the ability of beginning farmers to enter agriculture, may have prevented existing farmers from expanding their farm operations, and may have affected other participants in the Alberta rural land market. There is, however, little information to assess whether or not these are major problems.

The Department of Rural Economy of the University of Alberta, with financial assistance from Alberta Agriculture's Farming for the Future research program, is conducting a study to gain information about the Alberta market for agricultural land and about the effects of changing land prices on the participants in this market. This study involves a survey of land owners randomly selected from the 1981 list of land title changes. Strict confidentiality applies to all individual responses to this survey. No individual response will be identified. Each response will be combined with those from the other respondents and these will be analysed only as a group.

The overall results of the survey will be forwarded to the Alberta Department of Agriculture and to the major institutions which provide financing to purchasers of agricultural land. It is hoped that this study will provide accurate information on the purchasers of Alberta farmland and on the problems these purchasers may have encountered in buying agricultural land. The survey will also give a check on the accuracy of the scanty published information on land values. Your help in filling in the attached questionnaire is important to the success of this survey and the accuracy of its results. An addressed and stamped envelope is enclosed for return of the completed questionnaire.

Thank you for your help.

JoAnne Bye
Research Assistant

Michele Veeman
Professor

DEPARTMENT OF RURAL ECONOMY
Faculty of Agriculture and Forestry
The University of Alberta
Edmonton, Alberta T6G 2H1
Phone (403) 432-4225

January 19, 1983

Dear Respondent

Several weeks ago you were mailed a copy of the enclosed questionnaire. We are sending you this second copy because as many returns as possible are needed to ensure the accuracy of the survey. We can not determine who has responded and who has not because of the anonymity of respondents. We therefore must send this reminder to all those originally selected for the survey. If you have already completed and returned the questionnaire please accept our thanks for your help and disregard the enclosed.

If you have not yet completed and returned the questionnaire, we would greatly appreciate you taking a few minutes to complete the enclosed copy. Your response will aid the success of this survey and is important in giving more accurate information on the Alberta market for agricultural land. The survey will also provide information on any problems encountered by purchasers of Alberta farmland during the escalation of land prices which occurred until mid-1981. Strict confidentiality applies to all responses to the survey. The overall results of the survey will be forwarded to the Alberta Department of Agriculture and to the major institutions which provide financing to purchasers of agricultural land.

Thank you for your help.

JoAnne Bye
Research Assistant

Michele Veeman
Professor

U of A 1982-83
75th Anniversary

-CONFIDENTIAL

1981 ALBERTA LAND SURVEY

The substantial changes in prices of agricultural land which occurred over the 1970s and early 1980s may have caused problems for participants in this market. However, there is little information on the extent of these problems--for example, on whether lack of available financing, high interest costs, and reduced cash flow have restricted the ability of beginning farmers to enter agriculture, have prevented existing farmers from expanding their farm operations, or have affected other buyers and sellers of rural land. This questionnaire will give information about the Alberta market for agricultural land, about the effects of changing land prices on the participants in this market, and about the accuracy of published information on land values. Your name was randomly selected for this survey from the 1981 list of land title changes. Strict confidentiality applies to your individual responses to this survey. Your responses will be combined with those from the other respondents and these will be analysed only as a group.

INSTRUCTIONS: Please mark (x) the answer which corresponds most closely to your own situation or fill in the blanks where required on the following questions. When you have finished the questionnaire please return it in the stamped envelope provided to:

1981 Alberta Land Survey
Department of Rural Economy
University of Alberta
Edmonton, Alberta, Canada T6G 2H1

1 In 1981 a change was made to at least one land title registered in your name at the Alberta Land Titles Office. Please indicate the reason(s) for this/these land title change(s) from the list below:

_____ Bought agricultural land (more than 60 acres of range, pasture, grassland, or cropland)

_____ Bought nonagricultural land

_____ Change in name(s)

_____ Transfer within your family

_____ Lien registration

_____ Transfer from creditor

_____ Estate transfer to executor/trix

_____ Unknown

_____ Other (please specify) _____

IF you answered Question 1 above with 'Bought agricultural land', please answer the following questions. If you did not respond 'Bought agricultural land', kindly return this questionnaire in the self-addressed envelope that has been provided.

2. Your age as of Dec. 31, 1981: _____ years

3. Education (please circle highest year completed as of Dec. 31, 1981):

Grade School 0 1 2 3 4 5 6 7 8 9

High School 10 11 12

Technical School 1 2 3 4

University 1 2 3 4 5 6 7 8 9

4. Indicate your place of residence as of Dec. 31, 1981.

____ Outside of Canada

____ In Canada but outside of Alberta

____ In Alberta in a city (population 10,000 and over)

____ In Alberta in a town (population under 10,000)

____ In Alberta on a farm

____ Other (please specify) _____

5. Indicate the business, service or industry you were working in, as of Dec. 31, 1981, from the list below. Tick more than one if applicable

____ Agriculture (Farming, Ranching)

____ Forestry, Fishing, Trapping

____ Mining, Quarrys, Oil Wells

____ Education, Health, Welfare, Services

____ Construction, Transportation, Communications, Other Utilities

____ Retail Trade, Wholesale Trade, Sales

____ Finance, Insurance, Real Estate

____ Manufacturing

____ Retired

____ Not Employed

If you answered Question 5 with "Agriculture", please complete the following questions. If you did not respond "Agriculture", please go to Question 9.

6. Please respond to each question below.

a. Did you have an off-farm job immediately before you purchased your FIRST parcel of agricultural land in 1981? YES ____ NO ____

b. Did your spouse have an off-farm job immediately before you purchased your FIRST parcel of agricultural land in 1981? YES ____ NO ____ NOT APPLICABLE ____

c. Have you had an off-farm job at any time in 1982? YES ____ NO ____

d. Has your spouse had an off-farm job at any time in 1982?
YES ____ NO ____ NOT APPLICABLE ____

7. What was your farm business structure as of Dec. 31, 1981?

____ Individual ____ Partnership ____ Corporation ____ Joint Venture

8 How many years have you been farming? _____ years

9 How many years have you been an agricultural land owner? _____ years

10 Please answer all of the following questions in terms of the FIRST parcel of agricultural land you bought in 1981.

a	Total acreage in parcel	_____ acres
b	Cultivated acreage in parcel	_____ acres
c	Market value per acre of parcel in 1981	$ _____ /acre
d	Major Canada Land Inventory (CLI) classification (circle your answer)	1 2 3 4 5 6 7 Don't Know
e	Distance from parcel to nearest city (population over 10,000)	_____ miles
f	Location of parcel (complete one giving name or number)	County #_____ Special Area #_____ Municipal District #_____ Improvement District #_____
g	Ownership of parcel in 1981	____ Individual ____ Family Partnership ____ Nonfamily Partnership ____ Family Corporation ____ Nonfamily Corporation

11 Listed below are some reasons to buy agricultural land. Were these reasons Very Unimportant (1), Unimportant (2), Neutral (3), Important (4), or Very Important (5) to you in your decision to buy your FIRST parcel of agricultural land in 1981?

		Very Unimportant				Very Important
a	Expand existing farming operation	1	2	3	4	5
b	To increase farming income	1	2	3	4	5
c	Spread fixed costs over a larger farming operation	1	2	3	4	5
d	Make better use of machinery	1	2	3	4	5
e	Make better use of labor	1	2	3	4	5
f	Help your child enter into farming	1	2	3	4	5
g	Establish own farm	1	2	3	4	5
h	Second homesite development	1	2	3	4	5
i	Recreation	1	2	3	4	5
j	Nonagricultural development	1	2	3	4	5
k	Investment	1	2	3	4	5
l	Hedge against inflation	1	2	3	4	5
m	Anticipation of capital gains	1	2	3	4	5
n	Tax deferral rollover provisions	1	2	3	4	5
o	Move farm operation	1	2	3	4	5
p	Desire to move away from city or town	1	2	3	4	5
q	No land to rent	1	2	3	4	5
r	Closeness to other property	1	2	3	4	5
s	Closeness to residence	1	2	3	4	5
t	Good purchase price	1	2	3	4	5
u	Other (please specify) _____	1	2	3	4	5

12 Which ONE of the above reasons was MOST important in your decision to buy that first parcel of agricultural land in 1981? _____

13 Respond to each question below in terms of your first 1981 agricultural land purchase

a _____ Number of acres **owned** by you before your purchase

b _____ Number of acres **owned** by you following your purchase

c _____ Number of acres **rented** by you from others before your purchase

d _____ Number of acres **rented** by you from others following your purchase

14 Had you ever rented the agricultural land you purchased in 1981? YES ____ NO ____

15 How many agricultural land acres, in total, did you purchase in 1981? _____ acres

16 Please respond to each question below

a How many agricultural land acres did you sell between Jan 1, 1980 and the time of your 1981 purchase? _____ acres

If you did not sell any agricultural land during that time period please go to Question 17.

b In which municipality was the agricultural land you sold in that time period?

County #_____ Special Area #_____

Municipal District #_____ Improvement District #_____

c Listed below are eleven reasons to sell agricultural land. Were these reasons Very Unimportant (1), Unimportant (2), Neutral (3), Important (4), or Very Important (5) to you in your decision to sell agricultural land in 1980-1981?

		Very Unimportant				Very Important
i	Property was expropriated	1	2	3	4	5
ii	Urban expansion forced sale	1	2	3	4	5
iii	To realize capital gains	1	2	3	4	5
iv	Moving farm operation	1	2	3	4	5
v	Another job	1	2	3	4	5
vi	Financial problems	1	2	3	4	5
vii	Speculation	1	2	3	4	5
viii	Farm was too large	1	2	3	4	5
ix	Changing farm operation	1	2	3	4	5
x	Retirement or health	1	2	3	4	5
xi	Other (please specify) _____	1	2	3	4	5

17. Indicate how you paid for the FIRST parcel of agricultural land you bought in 1981 by giving the percentage of total financing you received from each of the following sources:

_____% Your own funds

_____% Chartered banks, trust co., credit unions, or treasury branches

_____% Alberta Agriculture Development Corporation (AADC)

_____% Farm Credit Corporation (FCC)

_____% Federal Business Development Bank (FBDB)

_____% Seller financing

_____% Family

_____% Other (please specify) _____

18. Would you still have bought this agricultural land if you had been unable to qualify for loans from FCC, AADC and/or FBDB?

YES ____ NO ____ DID NOT APPLY TO THESE AGENCIES ____

19. What did you do with the agricultural land you bought in 1981, in the 1982 farming season?

_____ Farmed it myself

_____ Rented it to someone else to farm

_____ Hired someone to farm it for me

_____ Held it idle

_____ Other (please specify) _____

20. Do you know of any significant factors which may have influenced the price you paid for the agricultural land you bought in 1981?

_____

_____

_____

21. Please give us any additional comments that you think might help us evaluate the agricultural land market in Alberta

_____

_____

_____

Certificate of Title

Canada

GOVERNMENT OF THE PROVINCE OF ALBERTA

NO.	8 1 1 1 7 1 5 4 5
REF.	1 2 9 E 8 2
VALUE $	3 8 0 7 5 0 0

MRG	TWP	SEC	Q	PT
4	14	13	10	SW

	PLAN	BLK	LOT	PT
2				

KS

South Alberta Land Registration District

THIS IS TO CERTIFY that HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF ALBERTA

IS now the owner of an estate in fee simple

of and in

THE SOUTH WEST QUARTER OF SECTION TEN (10)

IN TOWNSHIP THIRTEEN (13)

RANGE FOUR (4)

WEST OF THE FOURTH MERIDIAN,

CONTAINING 64.7 HECTARES (160 ACRES) MORE OR LESS,

RESERVING UNTO HER MAJESTY ALL MINES AND MINERALS.

NOT A VALID TITLE
PHOTO COPY ONLY
9 AM SEP 2 7 1982
SOUTH ALBERTA LAND REGISTRATION DISTRICT

SUBJECT TO THE ENCUMBRANCES, LIENS, ESTATES OR INTERESTS NOTIFIED BY MEMORANDUM UNDERWRITTEN OR ENDORSED HEREON, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER.

IN WITNESS WHEREOF I have hereunto subscribed my name and affixed my official seal

this 10TH day of SEPTEMBER, A.D. 1981

Post Office Address C/O THE ASSOCIATE MINISTER OF PUBLIC LANDS AND WILDLIFE, PETROLEUM BUILDING

SOUTH TOWER, 9915 108 STREET, EDMONTON, ALBERTA.

Registrar

South Alberta Land Registration District

A G 1818 V 1232
Rev. 9 73

ABBREVIATIONS

E – Easement
C – Caveat
Tr – Transmission
Tfr – Transfer
Mtge – Mortgage
URW – Utility Right of Way
BL – Builders Lien
TN – Tax Notification
WE – Writ of Execution
C.C. – Covenants and Conditions
ENCUM – Encumbrance

Certificate of Title

Show Other Abbreviations Here

NAME HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF ALBERTA

LAND 4 - 4 - 13 - 10 - SW

TITLE NO. 81 11 11 11 71 11 51 41 51

CHARGES, LIENS AND INTERESTS.

Nature of Instrument	Registration Number	Date of Registration DY	MO	YR	Amount	PARTICULARS	Signature of Registrar	Discharges and Withdrawals: Registration Number	Date of Registration DY	MO	YR	Signature of Registrar
C	5186 LF	28	2	72		ELKWATER NATURAL GAS LTD.	✓					
C	7608 LE	2	3	72		CONLAC GAS LTD.	✓					
C	771099527	25	7	77		BRALORNE RESOURCES LIMITED						

TABLE A.1: 1981 Alberta Land Survey:
Number of Transfers Sampled by Municipality

MUNICIPALITY SAMPLED	NAME OF MUNICIPALITY	NUMBER OF TRANSFERS SAMPLED
Special Areas:		
2	N/A	21
3	N/A	16
4	N/A	18
Counties:		
1	Grande Prairie	46
2	Vulcan	38
3	Ponoka	31
4	Newell	27
5	Warner	24
6	Stettler	39
7	Thorhild	25
8	Forty Mile	38
9	Beaver	39
10	Wetaskwin	25
11	Barrhead	20
12	Athabasca	47
13	Smoky Lake	22
14	Lacombe	33
16	Wheatland	42
17	Mountain View	44
18	Paintearth	24
19	St. Paul	36
20	Strathcona	17
21	Two Hills	29
22	Camrose	41
23	Red Deer	48
24	Vermilion River	47
25	Leduc	46
26	Lethbridge	32
27	Minburn	30
28	Lac St. Anne	29
29	Flagstaff	41
30	Lamont	39
31	Parkland	40
Improvement Districts:		
1	N/A	31
6	N/A	4
7	N/A	1
8	N/A	4
10	N/A	23
14	N/A	32
15	N/A	9
16	N/A	34
17	N/A	47
18	N/A	37
19	N/A	32
20	N/A	37
21	N/A	32
22	N/A	32
23	N/A	16

Municipal Districts:

6	Cardston	23
9	Pincher Creek	19
14	Taber	37
26	Willow Creek	45
31	Foothills	32
34	Acadia	2
44	Rockyview	57
47	Starland	18
52	Provost	26
61	Wainwright	20
87	Bonnyville	26
90	Sturgeon	32
92	Westlock	40
130	Smoky River	30
133	Spirit River	11
135	Peace	9
136	Fairview	16

Appendix B

TABLE B.1: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Younger Age Group* of Agricultural Land Purchasers

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	16.8	5.0	13.0	21.0	44.1	100.0
Increase farm income	11.6	7.5	14.5	24.9	41.5	100.0
Spread fixed costs	21.9	13.9	23.2	19.8	21.1	100.0
Use machinery	22.5	15.4	23.3	22.5	16.2	100.0
Use labor	28.9	18.4	25.9	14.2	12.6	100.0
Child entering farming	47.4	11.2	19.4	11.2	10.8	100.0
Establish own farm	7.6	4.4	8.0	14.1	65.9	100.0
Second home	63.0	11.3	16.0	5.5	4.2	100.0
Recreation	76.4	9.3	10.5	2.5	1.3	100.0
Nonag. development	84.5	6.3	6.3	1.3	1.7	100.0
Investment	27.8	2.9	25.7	27.8	15.8	100.0
Inflation hedge	37.4	10.1	26.1	20.2	6.3	100.0
Capital gains	54.1	6.2	22.7	10.7	6.2	100.0
Tax deferral rollover	67.5	9.7	13.9	5.5	3.4	100.0
Move operation	66.9	10.5	13.8	2.9	5.9	100.0
Move from city/town	59.6	5.0	13.7	10.4	11.2	100.0
No rental land	43.7	13.0	21.4	11.8	10.1	100.0
Close to property	31.0	7.1	13.8	22.2	25.9	100.0
Close to residence	34.3	7.6	16.9	19.5	21.6	100.0
Good price	8.3	7.9	23.2	29.0	31.5	100.0
Other	2.8	11.1	5.6	8.3	72.2	100.0

*Respondents in this age group were 36 years of age and younger.

**TABLE B.2: 1981 Alberta Land Survey Frequency Distributions:
Importance of Reasons for Selling Agricultural Land in Alberta Between
January 1, 1980 and the end of 1981 Cited by the Younger Age Group* of Agricultural Land Purchasers**

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	96.2	0.0	3.8	0.0	0.0	100.0
Urban expansion	92.3	0.0	7.7	0.0	0.0	100.0
Capital gains	53.8	3.8	23.1	11.5	7.7	100.0
Moving operation	25.9	3.7	7.4	22.2	40.7	100.0
Another job	88.5	3.8	3.8	0.0	3.8	100.0
Financing problems	57.7	7.7	7.7	11.5	15.4	100.0
Speculation	63.0	0.0	22.2	7.4	7.4	100.0
Farm too large	84.6	3.8	11.5	0.0	0.0	100.0
Changing operation	38.5	0.0	7.7	23.1	30.8	100.0
Retirement or health	84.6	7.7	7.7	0.0	0.0	100.0
Other	40.0	0.0	0.0	0.0	60.0	100.0

*Respondents in this age group were 36 years of age and younger.

TABLE B.3: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Older Age Group* of Agricultural Land Purchasers

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	16.8	2.9	13.9	27.7	38.7	100.0
Increase farm income	14.6	6.4	16.4	22.8	39.8	100.0
Spread fixed costs	18.8	12.7	26.1	19.4	23.0	100.0
Use machinery	21.7	9.0	20.5	28.3	20.5	100.0
Use labor	27.3	10.9	25.5	21.2	15.2	100.0
Child entering farming	21.3	11.2	17.2	21.3	29.0	100.0
Establish own farm	25.9	8.8	19.4	15.3	30.6	100.0
Second home	54.9	13.0	16.0	6.8	9.3	100.0
Recreation	68.4	11.6	10.3	6.5	3.2	100.0
Nonag. development	76.0	7.8	9.7	2.6	3.9	100.0
Investment	21.5	7.9	26.0	26.6	18.1	100.0
Inflation hedge	26.8	11.3	26.8	19.0	16.1	100.0
Capital gains	45.8	8.3	23.8	11.3	10.7	100.0
Tax deferral rollover	58.0	8.3	14.2	7.7	11.8	100.0
Move operation	63.0	7.9	10.3	7.9	10.9	100.0
Move from city/town	59.5	11.0	11.0	6.1	12.3	100.0
No rental land	49.1	12.4	15.5	12.4	10.6	100.0
Close to property	30.2	6.5	10.7	14.2	38.5	100.0
Close to residence	38.4	8.2	16.4	14.5	22.6	100.0
Good price	12.4	13.5	31.2	19.4	23.5	100.0
Other	12.5	0.0	5.0	12.5	70.0	100.0

*Respondents in this age group were 37 years of age and older.

TABLE B.4: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Selling Agricultural Land in Alberta Between January 1, 1980 and the end of 1981 Cited by the Older Age Group* of Agricultural Land Purchasers

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	83.3	2.8	8.3	2.8	2.8	100.0
Urban expansion	69.2	2.6	7.7	5.1	15.4	100.0
Capital gains	55.0	7.5	10.0	5.0	22.5	100.0
Moving operation	22.2	2.2	8.9	20.0	46.7	100.0
Another job	83.3	5.6	11.1	0.0	0.0	100.0
Financing problems	56.1	4.9	9.8	9.8	19.5	100.0
Speculation	61.5	7.7	12.8	10.7	7.7	100.0
Farm too large	82.1	5.1	10.3	2.6	0.0	100.0
Changing operation	37.8	2.2	6.7	26.7	26.7	100.0
Retirement or health	80.5	4.9	7.3	2.4	4.9	100.0
Other	36.8	0.0	15.8	5.3	42.1	100.0

*Respondents in this age group were 37 years of age and older.

TABLE B.5: 1981 Alberta Land Survey Frequency Distributions:
Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Urban Residency Group* of Agricultural Land Purchasers

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	25.4		15.3	23.7	35.6	100.0
Increase farm income	21.3	9.8	9.8	23.0	36.1	100.0
Spread fixed costs	27.6	8.6	29.3	17.2	17.2	100.0
Use machinery	31.0	5.2	20.7	31.0	12.1	100.0
Use labor	35.6	11.9	23.7	16.9	11.9	100.0
Child entering farming	48.3	8.3	11.7	15.0	16.7	100.0
Establish own farm	13.8	1.5	23.1	16.9	44.6	100.0
Second home	55.7	16.4	13.1	6.6	8.2	100.0
Recreation	59.3	15.3	10.2	10.2	5.1	100.0
Nonag. development	72.4	6.9	8.6	5.2	6.9	100.0
Investment	21.7	5.8	21.7	31.9	18.8	100.0
Inflation hedge	29.2	9.2	27.7	18.5	15.4	100.0
Capital gains	42.9	11.1	23.8	9.5	12.7	100.0
Tax deferral rollover	55.6	9.5	15.9	9.5	9.5	100.0
Move operation	71.7	3.3	8.3	5.0	11.7	100.0
Move from city/town	41.0	8.2	24.6	18.0	8.2	100.0
No rental land	60.3	10.3	10.3	6.9	12.1	100.0
Close to property	36.7	5.0	5.0	21.7	31.7	100.0
Close to residence	40.4	7.0	21.1	15.8	15.8	100.0
Good price	13.8	1.7	34.5	24.1	25.9	100.0
Other	11.1	0.0	11.1		77.8	100.0

*Respondents in this residency group lived in a town or city in Alberta.

TABLE B.6: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Selling Agricultural Land in Alberta Between January 1, 1980 and the end of 1981 Cited by the Urban Residency Group* of Agricultural Land Purchasers

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	90.0	0.0	10.0	0.0	0.0	100.0
Urban expansion	80.0	0.0	10.0	0.0	10.0	100.0
Capital gains	41.7	16.7	33.3	0.0	8.3	100.0
Moving operation	7.1	0.0	21.4	21.4	50.0	100.0
Another job	80.0	0.0	10.0	0.0	10.0	100.0
Financing problems	54.5	9.1	18.2	0.0	18.2	100.0
Speculation	63.6	0.0	27.3	0.0	9.1	100.0
Farm too large	70.0	0.0	30.0	0.0	0.0	100.0
Changing operation	15.4	0.0	23.1	23.1	38.5	100.0
Retirement or health	46.2	15.4	15.4	7.7	15.4	100.0
Other	0.0	0.0	100.0	0.0	00.0	100.0

*Respondents in this residency group lived in a town or city in Alberta.

TABLE B.7: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Rural Residency Group* of Agricultural Land Purchasers

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	13.9	5.1	13.3	23.8	44.0	100.0
Increase farm income	9.9	6.6	16.0	24.4	43.1	100.0
Spread fixed costs	18.2	13.8	24.3	20.3	23.4	100.0
Use machinery	18.8	14.3	22.8	24.6	19.5	100.0
Use labor	24.5	16.9	26.4	17.8	14.4	100.0
Child entering farming	34.1	12.1	19.8	15.2	18.9	100.0
Establish own farm	15.1	7.6	10.9	13.9	52.6	100.0
Second home	60.2	11.9	16.3	5.6	6.0	100.0
Recreation	77.1	9.2	9.2	3.2	1.3	100.0
Nonag. development	83.4	7.3	7.0	1.3	1.0	100.0
Investment	27.2	4.6	27.2	26.3	14.7	100.0
Inflation hedge	34.2	10.7	27.0	18.8	9.4	100.0
Capital gains	52.6	6.4	22.3	11.0	7.6	100.0
Tax deferral rollover	64.8	9.6	13.3	5.6	6.8	100.0
Move operation	64.9	10.9	12.4	4.3	7.5	100.0
Move from city/town	64.7	7.4	9.9	6.2	11.8	100.0
No rental land	42.2	13.4	20.2	13.7	10.6	100.0
Close to property	29.2	7.6	13.4	18.8	31.0	100.0
Close to residence	33.8	7.9	16.1	18.3	24.0	100.0
Good price	8.7	11.4	24.9	24.9	30.0	100.0
Other	12.9	0.0	3.2	12.9	71.0	100.0

*Respondents in this residency group lived on a farm in Alberta.

TABLE B.8: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Selling Agricultural Land in Alberta Between January 1, 1980 and the end of 1981 Cited by the Rural Residency Group* of Agricultural Land Purchasers

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	87.8	2.0	6.1	2.0	2.0	100.0
Urban expansion	76.9	1.9	7.7	3.8	9.6	100.0
Capital gains	54.9	3.9	11.8	9.8	19.6	100.0
Moving operation	25.9	3.7	5.6	20.4	44.4	100.0
Another job	85.7	6.1	8.2	0.0	0.0	100.0
Financing problems	56.6	5.7	7.5	13.2	17.0	100.0
Speculation	59.6	5.8	15.4	11.5	7.7	100.0
Farm too large	84.6	5.8	7.7	1.9	0.0	100.0
Changing operation	41.8	1.8	3.6	27.3	25.5	100.0
Retirement or health	90.2	3.9	5.9	0.0	0.0	100.0
Other	37.0	0.0	7.4	3.7	51.9	100.0

*Respondents in this residincy group lived on a farm in Alberta.

TABLE B.9: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the City Residency Group* of Agricultural Land Purchasers

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	25.9	0.0	14.8	29.6	29.6	100.0
Increase farm income	25.0	14.3	10.7	17.9	32.1	100.0
Spread fixed costs	28.0	8.0	28.0	16.0	20.0	100.0
Use machinery	40.0	4.0	8.0	32.0	16.0	100.0
Use labor	42.3	11.5	15.4	19.2	11.5	100.0
Child entering farming	53.8	3.8	7.7	19.2	15.4	100.0
Establish own farm	14.3	3.6	21.4	14.3	46.4	100.0
Second home	57.7	7.7	15.4	7.7	11.5	100.0
Recreation	44.0	12.0	12.0	20.0	12.0	100.0
Nonag. development	64.0	4.0	12.0	8.0	12.0	100.0
Investment	18.8	9.4	18.8	34.4	18.8	100.0
Inflation hedge	20.7	10.3	20.7	24.1	24.1	100.0
Capital gains	32.1	7.1	25.0	17.9	17.9	100.0
Tax deferral rollover	55.6	0.0	18.5	14.8	11.1	100.0
Move operation	76.0	4.0	4.0	8.0	8.0	100.0
Move from city/town	37.0	7.4	18.5	25.9	11.1	100.0
No rental land	68.0	4.0	12.0	0.0	16.0	100.0
Close to property	30.8	0.0	3.8	15.4	50.0	100.0
Close to residence	37.5	4.2	25.0	12.5	20.8	100.0
Good price	20.0	0.0	32.0	20.0	28.0	100.0
Other	25.0	0.0	0.0	0.0	75.0	100.0

*Respondents in this residency group lived in a city (populaton 10,000 and over) in Alberta.

TABLE B.10: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Selling Agricultural Land in Alberta Between January 1, 1980 and the end of 1981 Cited by the City Residency Group* of Agricultural Land Purchasers

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	66.6	0.0	33.3	0.0	0.0	100.0
Urban expansion	33.3	0.0	33.3	0.0	33.3	100.0
Capital gains	20.0	20.0	40.0	0.0	20.0	100.0
Moving operation	0.0	0.0	50.0	0.0	50.0	100.0
Another job	66.7	0.0	33.3	0.0	0.0	100.0
Financing problems	66.7	0.0	33.3	0.0	0.0	100.0
Speculation	25.0	0.0	50.0	0.0	25.0	100.0
Farm too large	66.7	0.0	33.3	0.0	0.0	100.0
Changing operation	0.0	0.0	75.0	0.0	25.0	100.0
Retirement or health	20.0	20.0	20.0	20.0	20.0	100.0
Other	0.0	0.0	100.0	0.0	0.0	100.0

*Respondents in this residency group lived in a city (population 10,000 and over) in Alberta.

**TABLE B.11: 1981 Alberta Land Survey Frequency Distributions:
Importance of Reasons for Purchasing the First Parcel of Agricultural
Land in Alberta in 1981 Cited by the Agricultural Occupation Group of Agricultural Land Purchasers**

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	12.7	4.6	13.5	24.5	44.7	100.0
Increase farm income	9.1	7.5	15.3	25.2	42.9	100.0
Spread fixed costs	17.3	14.0	24.7	20.8	23.3	100.0
Use machinery	17.9	13.6	22.6	26.4	19.6	100.0
Use labor	24.6	16.4	26.0	18.3	14.8	100.0
Child entering farming	35.5	11.3	18.7	15.2	19.3	100.0
Establish own farm	15.2	6.7	11.2	14.4	52.4	100.0
Second home	60.5	11.2	16.0	6.2	6.2	100.0
Recreation	76.6	9.4	9.1	3.7	1.1	100.0
Nonag. development	82.7	6.8	7.4	1.1	2.0	100.0
Investment	27.4	4.9	25.7	27.1	14.9	100.0
Inflation hedge	35.3	10.6	27.5	18.2	8.4	100.0
Capital gains	52.7	6.8	22.3	10.9	7.3	100.0
Tax deferral rollover	64.7	8.8	13.4	5.8	7.4	100.0
Move operation	64.1	9.9	12.7	4.4	8.8	100.0
Move from city/town	63.6	7.2	10.8	7.5	10.8	100.0
No rental land	43.0	13.4	20.1	12.6	10.9	100.0
Close to property	28.8	6.8	13.0	19.0	32.3	100.0
Close to residence	33.7	7.0	17.4	18.3	23.6	100.0
Good price	9.7	10.5	26.5	24.3	28.9	100.0
Other	1.5	0.0	11.8	5.9	69.1	100.0

**TABLE B.12: 1981 Alberta Land Survey Frequency Distributions:
Importance of Reasons for Selling Agricultural Land in Alberta Between
January 1, 1980 and the end of 1981 Cited by the Agricultural Occupation Group of Agricultural Land Purchasers**

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	89.5	1.8	5.3	1.8	1.8	100.0
Urban expansion	81.7	1.7	6.7	1.7	8.3	100.0
Capital gains	56.7	5.0	13.3	8.3	16.7	100.0
Moving operation	24.2	3.0	6.1	21.2	45.5	100.0
Another job	86.0	5.3	7.0	0.0	1.8	100.0
Financing problems	54.8	6.5	8.1	11.3	19.4	100.0
Speculation	65.0	5.0	15.0	10.0	5.4	100.0
Farm too large	83.3	5.0	10.0	1.7	0.0	100.0
Changing operation	37.9	1.5	4.5	27.3	28.8	100.0
Retirement or health	86.7	5.0	6.7	0.0	1.7	100.0
Other	39.3	0.0	7.1	3.6	50.0	100.0

**TABLE B.13: 1981 Alberta Land Survey Frequency Distributions:
Importance of Reasons for Purchasing the First Parcel of Agricultural
Land in Alberta in 1981 Cited by the Non-Agricultural Occupation Group of Agricultural Land Purchasers**

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	55.0		12.5	17.5	15.0	100.0
Increase farm income	48.7	2.6	15.4	12.8	20.5	100.0
Spread fixed costs	54.1	8.1	21.6	8.1	8.1	100.0
Use machinery	63.2	5.3	18.4	10.5	2.6	100.0
Use labor	63.2	3.5	23.7	5.3	2.6	100.0
Child entering farming	44.7	10.5	15.8	18.4	10.5	100.0
Establish own farm	13.3	2.2	24.4	15.6	44.4	100.0
Second home	53.5	18.6	16.3	4.7	7.0	100.0
Recreation	42.5	17.0	22.5	7.5	10.0	100.0
Nonag. development	66.7	7.7	10.3	7.7	7.7	100.0
Investment	8.2	6.1	26.5	28.6	30.6	100.0
Inflation hedge	16.3	10.2	18.4	30.6	24.5	100.0
Capital gains	33.3	9.5	31.0	11.9	14.3	100.0
Tax deferral rollover	53.7	12.2	19.5	12.2	2.4	100.0
Move operation	76.2	4.8	9.5	0.0	9.5	100.0
Move from city/town	25.6	9.3	27.9	18.6	18.6	100.0
No rental land	70.7	7.3	9.8	7.3	4.9	100.0
Close to property	47.5	7.5	7.5	17.5	20.0	100.0
Close to residence	56.4	15.4	10.3	10.3	7.7	100.0
Good price	12.2	7.3	26.8	31.8	22.0	100.0
Other	12.5	0.0	0.0	0.0	87.5	100.0

**TABLE B.14: 1981 Alberta Land Survey Frequency Distributions:
Importance of Reasons for Selling Agricultural Land in Alberta Between
January 1, 1980 and the end of 1981 Cited by the Non-Agricultural Occupation Group of Agricultural Land Purchasers**

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	80.0	0.0	20.0	0.0	0.0	100.0
Urban expansion	40.0	0.0	20.0	20.0	20.0	100.0
Capital gains	33.3	16.7	33.3	0.0	16.7	100.0
Moving operation	16.7	0.0	33.3	16.7	33.3	100.0
Another job	80.0	0.0	20.0	0.0	0.0	100.0
Financing problems	80.0	0.0	20.0	0.0	0.0	100.0
Speculation	33.3	0.0	33.3	0.0	33.3	100.0
Farm too large	80.0	0.0	20.0	0.0	0.0	100.0
Changing operation	40.0	0.0	40.0	0.0	20.0	100.0
Retirement or health	42.9	14.3	14.3	14.3	14.3	100.0
Other	40.0	0.0	40.0	0.0	20.0	100.0

TABLE B.15: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Group of Agricultural Land Purchasers Who Did Not Sell Agricultural Land Between January 1, 1980 and the Time of Their Agricultural Land Purchase in 1981

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	16.2	4.0	13.7	22.9	43.3	100.0
Increase farm income	11.9	7.6	15.9	22.0	42.7	100.0
Spread fixed costs	20.3	14.7	24.1	17.8	23.1	100.0
Use machinery	21.1	13.6	22.9	23.8	18.6	100.0
Use labor	25.6	15.9	28.4	15.9	14.1	100.0
Child entering farming	38.7	12.9	20.0	14.1	17.5	100.0
Establish own farm	12.1	5.6	12.4	14.8	55.0	100.0
Second home	61.2	11.2	15.6	5.6	6.3	100.0
Recreation	72.7	10.2	11.1	4.4	1.6	100.0
Nonag. development	81.3	6.7	7.9	1.6	2.5	100.0
Investment	24.5	3.9	26.4	28.5	16.7	100.0
Inflation hedge	32.6	11.5	27.0	20.2	8.7	100.0
Capital gains	54.7	6.8	23.0	10.2	5.3	100.0
Tax deferral rollover	67.5	10.4	13.6	5.4	3.2	100.0
Move operation	71.3	10.7	11.7	2.5	3.8	100.0
Move from city/town	60.1	6.5	11.8	9.3	12.1	100.0
No rental land	44.0	12.3	20.8	11.6	11.3	100.0
Close to property	28.4	7.1	12.0	19.8	32.7	100.0
Close to residence	33.5	7.9	16.5	18.0	24.1	100.0
Good price	8.5	8.8	27.7	24.3	30.7	100.0
Other	11.7	0.0	3.3	11.7	73.3	100.0

TABLE B.16: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Group of Agricultural Land Purchasers Who Did Sell Agricultural Land Between January 1, 1980 and the Time of Their Agricultural Land Purchase in 1981

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	19.3	4.8	12.0	27.7	36.1	100.0
Increase farm income	16.7	4.8	13.1	32.1	33.3	100.0
Spread fixed costs	22.3	8.5	25.6	26.8	17.1	100.0
Use machinery	26.5	9.6	19.3	28.9	15.7	100.0
Use labor	38.1	13.1	15.5	21.4	11.9	100.0
Child entering farming	27.2	17.3	12.3	21.0	22.2	100.0
Establish own farm	27.2	8.6	13.6	13.6	37.0	100.0
Second home	53.7	15.0	17.5	7.5	6.3	100.0
Recreation	75.3	10.4	7.8	2.6	3.9	100.0
Nonag. development	80.5	7.8	6.5	2.6	2.2	100.0
Investment	27.3	9.1	23.9	22.7	17.0	100.0
Inflation hedge	34.5	7.1	23.8	17.9	16.7	100.0
Capital gains	36.4	8.0	23.9	13.6	18.2	100.0
Tax deferral rollover	49.4	4.5	15.7	10.1	20.2	100.0
Move operation	43.7	4.6	14.9	13.8	23.0	100.0
Move from city/town	57.3	11.0	15.9	6.1	9.8	100.0
No rental land	53.1	14.8	12.3	13.6	6.2	100.0
Close to property	39.3	6.0	14.3	15.5	25.0	100.0
Close to residence	45.6	7.6	17.7	15.2	13.9	100.0
Good price	15.9	15.9	22.0	28.0	18.3	100.0
Other	18.8	0.0	12.5	6.3	62.5	100.0

TABLE B.17: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Group of Agricultural Land Purchasers Who Owned Less than 480 Acres of Land After Their Purchase of Agricultural Land in 1981

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	23.7	5.9	13.0	21.9	35.5	100.0
Increase farm income	17.0	8.2	14.0	25.7	35.1	100.0
Spread fixed costs	29.1	15.8	25.5	13.9	15.8	100.0
Use machinery	27.1	18.1	21.7	21.7	11.4	100.0
Use labor	30.3	17.6	29.1	13.3	9.7	100.0
Child entering farming	42.4	10.3	22.4	12.7	12.1	100.0
Establish own farm	5.6	2.8	11.7	15.0	65.0	100.0
Second home	57.6	12.4	17.6	8.2	1.2	100.0
Recreation	64.5	10.2	18.7	5.4	1.2	100.0
Nonag. development	77.0	8.5	10.9	1.8	1.8	100.0
Investment	19.1	2.3	26.6	34.1	17.9	100.0
Inflation hedge	29.0	11.2	29.6	23.1	7.1	100.0
Capital gains	47.1	9.3	22.7	14.0	7.0	100.0
Tax deferral rollover	58.1	13.8	16.2	7.2	4.8	100.0
Move operation	62.3	12.0	15.0	3.6	7.2	100.0
Move from city/town	47.6	7.6	18.8	11.2	14.7	100.0
No rental land	40.4	13.3	23.5	11.4	11.4	100.0
Close to property	33.5	9.0	13.8	19.2	24.6	100.0
Close to residence	33.9	10.3	17.0	20.6	18.2	100.0
Good price	8.3	7.1	29.8	28.6	26.2	100.0
Other	8.0	0.0	12.0	8.0	72.0	100.0

TABLE B.18: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Selling Agricultural Land in Alberta Between January 1, 1980 and the end of 1981 Cited by the Group of Agricultural Land Purchasers Who Owned Less Than 480 Acres of Land After Their Purchase of Agricultural Land in 1981

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	81.3	0.0	12.5	0.0	6.3	100.0
Urban expansion	81.3	0.0	12.5	0.0	6.3	100.0
Capital gains	47.1	11.8	23.5	11.8	5.9	100.0
Moving operation	35.3	0.0	5.5	29.4	29.4	100.0
Another job	66.7	6.7	26.7	0.0	0.0	100.0
Financing problems	44.4	0.0	16.7	11.1	27.8	100.0
Speculation	52.9	5.9	23.5	11.8	5.9	100.0
Farm too large	75.0	6.3	18.8	0.0	0.0	100.0
Changing operation	41.2	0.0	5.9	35.3	17.6	100.0
Retirement or health	77.8	5.6	16.7	0.0	0.0	100.0
Other	55.6	0.0	22.2	0.0	22.2	100.0

TABLE B.19: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Group of Agricultural Land Purchasers Who Owned 480 Acres or More of Land Following Their Purchase of Agricultural Land in 1981

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	12.0	2.9	13.6	25.2	46.3	100.0
Increase farm income	10.0	6.2	16.2	22.8	44.8	100.0
Spread fixed costs	14.8	11.8	23.6	23.6	26.2	100.0
Use machinery	18.8	9.2	22.5	27.1	22.5	100.0
Use labor	26.8	13.8	23.4	19.7	16.3	100.0
Child entering farming	32.2	11.9	15.7	17.4	22.9	100.0
Establish own farm	22.2	8.8	13.4	14.2	41.4	100.0
Second home	61.3	11.7	14.8	4.3	7.8	100.0
Recreation	79.6	10.2	4.4	3.1	2.7	100.0
Nonag. development	84.1	5.7	5.3	1.8	3.1	100.0
Investment	29.4	6.9	25.3	22.4	15.9	100.0
Inflation hedge	35.9	10.1	24.1	17.3	12.7	100.0
Capital gains	53.4	5.5	23.5	8.8	8.8	100.0
Tax deferral rollover	67.4	5.9	12.6	5.9	8.4	100.0
Move operation	67.5	7.6	10.5	5.9	8.4	100.0
Move from city/town	68.2	7.3	8.2	9.9	9.4	100.0
No rental land	49.8	12.4	15.9	12.4	9.4	100.0
Close to property	28.6	5.4	11.6	18.7	35.7	100.0
Close to residence	37.4	6.1	16.5	15.2	24.8	100.0
Good price	11.1	12.3	24.3	22.6	29.6	100.0
Other	13.7	0.0	2.0	11.8	72.5	100.0

TABLE B.20: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Selling Agricultural Land in Alberta Between January 1, 1980 and the end of 1981 Cited by the Group of Agricultural Land Purchasers Who Owned 480 Acres or More of Land Following Their Purchase of Agricultural Land in 1981

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	91.3	2.2	4.3	2.2	0.0	100.0
Urban expansion	77.6	2.0	6.1	4.1	10.2	100.0
Capital gains	57.1	4.1	12.2	6.1	20.4	100.0
Moving operation	20.0	3.6	9.1	18.2	49.1	100.0
Another job	91.5	4.3	2.1	0.0	0.3	100.0
Financing problems	61.2	8.2	6.1	10.2	14.3	100.0
Speculation	65.3	4.1	14.3	8.2	8.2	100.0
Farm too large	85.7	4.1	8.2	2.0	0.0	100.0
Changing operation	37.0	1.9	7.4	22.2	31.5	100.0
Retirement or health	83.7	6.1	4.1	2.0	4.0	100.0
Other	30.0	0.0	5.0	0.0	60.0	100.0

TABLE B.21: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Group of Agricultural Land Purchasers Who Owned Less Than 936 Acres of Land After Their Purchase of Agricultural Land in 1981

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	19.0	5.2	13.1	22.8	39.9	100.0
Increase farm income	14.8	7.4	14.8	23.2	39.9	100.0
Spread fixed costs	24.1	14.2	26.1	17.6	18.0	100.0
Use machinery	24.9	15.5	21.9	23.0	14.7	100.0
Use labor	30.0	17.1	27.0	14.8	11.0	100.0
Child entering farming	41.8	9.2	20.3	15.3	13.4	100.0
Establish own farm	6.0	3.9	11.7	15.3	63.0	100.0
Second home	60.4	11.7	16.6	6.4	4.9	100.0
Recreation	69.2	11.9	14.2	3.8	0.8	100.0
Nonag. development	79.6	7.7	9.2	1.9	1.5	100.0
Investment	23.7	4.4	25.5	30.3	16.1	100.0
Inflation hedge	32.0	10.2	28.9	20.7	8.3	100.0
Capital gains	50.6	8.1	22.5	12.2	6.6	100.0
Tax deferral rollover	64.2	11.3	14.0	6.4	4.2	100.0
Move operation	62.4	12.4	12.4	4.9	7.9	100.0
Move from city/town	54.9	6.7	14.6	10.4	13.4	100.0
No rental land	43.2	14.0	21.2	11.4	10.2	100.0
Close to property	33.7	8.2	12.0	19.1	27.0	100.0
Close to residence	36.3	8.4	15.3	18.3	21.8	100.0
Good price	10.4	8.9	25.9	27.0	27.8	100.0
Other	2.5	0.0	10.0	7.5	72.5	100.0

TABLE B.22: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Selling Agricultural Land in Alberta Between January 1, 1980 and the end of 1981 Cited by the Agricultural Land Purchasers Who Owned Less Than 936 Acres Following Their Purchase of Agricultural Land in 1981

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	81.3	3.1	9.4	3.1	3.1	100.0
Urban expansion	81.3	3.1	9.4	0.0	6.3	100.0
Capital gains	58.8	8.8	14.7	8.8	8.8	100.0
Moving operation	26.3	2.6	2.6	26.3	42.1	100.0
Another job	77.4	6.5	16.1	0.0	0.0	100.0
Financing problems	50.0	5.9	11.8	11.8	20.6	100.0
Speculation	55.9	8.8	20.6	8.8	5.9	100.0
Farm too large	78.8	6.1	15.2	0.0	0.0	100.0
Changing operation	36.1	2.8	8.3	30.6	22.2	100.0
Retirement or health	80.0	5.7	14.3	0.0	0.0	100.0
Other	47.1	0.0	17.6	5.9	29.4	100.0

TABLE B.23: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Group of Agricultural Land Purchasers Who Owned 936 Acres or More of Land After Their Purchase of Agricultural Land in 1981

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	12.6	2.1	14.0	25.9	45.5	100.0
Increase farm income	9.2	6.4	16.3	25.5	42.6	100.0
Spread fixed costs	14.2	12.1	21.3	23.4	29.1	100.0
Use machinery	17.0	7.8	22.7	28.4	24.1	100.0
Use labor	24.8	12.1	23.4	21.3	18.4	100.0
Child entering farming	26.4	15.0	15.0	15.7	27.9	100.0
Establish own farm	33.3	10.9	14.5	13.0	28.3	100.0
Second home	58.5	12.6	14.8	5.2	8.9	100.0
Recreation	81.1	6.8	3.0	4.5	4.5	100.0
Nonag. development	84.1	5.3	4.5	1.5	4.5	100.0
Investment	27.8	6.3	26.4	21.5	18.1	100.0
Inflation hedge	35.0	11.4	21.4	17.9	14.3	100.0
Capital gains	51.1	5.0	24.5	8.6	10.8	100.0
Tax deferral rollover	62.4	5.0	14.2	6.4	12.1	100.0
Move operation	71.0	3.6	12.3	5.1	8.0	100.0
Move from city/town	68.9	8.9	8.9	5.2	8.1	100.0
No rental land	51.1	10.4	14.8	13.3	10.4	100.0
Close to property	24.8	4.3	13.5	18.4	39.0	100.0
Close to residence	35.3	6.8	19.5	15.8	22.6	100.0
Good price	9.2	12.8	27.7	21.3	29.1	100.0
Other	13.9	0.0	2.8	13.9	69.4	100.0

TABLE B.24: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Selling Agricultural Land in Alberta Between January 1, 1980 and the end of 1981 Cited by the Agricultural Land Purchasers Who Owned 936 Acres or More After Their Purchase of Agricultural Land in 1981

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	96.7	0.0	3.3	0.0	0.0	100.0
Urban expansion	75.8	0.0	6.1	6.1	12.1	100.0
Capital gains	50.5	3.1	15.6	6.3	25.0	100.0
Moving operation	20.6	2.9	14.7	14.7	47.1	100.0
Another job	93.5	3.2	0.0	0.0	3.2	100.0
Financing problems	63.6	6.1	6.1	9.1	15.2	100.0
Speculation	68.8	0.0	12.5	9.4	9.4	100.0
Farm too large	87.5	3.1	6.3	3.1	0.0	100.0
Changing operation	40.0	0.0	5.7	20.0	34.3	100.0
Retirement or health	84.4	6.3	0.0	3.1	6.3	100.0
Other	25.0	0.0	0.0	0.0	75.0	100.0

TABLE B.25: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Group of Agricultural Land Purchasers Who Had an Off-Farm Job in 1981 Before Their Purchase of Agricultural Land

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	14.5	3.4	13.1	20.7	48.3	100.0
Increase farm income	13.2	7.6	11.1	23.6	44.4	100.0
Spread fixed costs	21.3	14.9	26.2	17.0	20.6	100.0
Use machinery	21.1	17.6	17.6	27.5	16.2	100.0
Use labor	25.5	17.7	22.7	15.6	18.4	100.0
Child entering farming	38.0	13.4	17.6	12.7	18.3	100.0
Establish own farm	4.0	2.6	6.6	15.2	71.5	100.0
Second home	59.9	10.2	17.5	6.6	5.8	100.0
Recreation	69.1	10.3	14.0	5.9	0.7	100.0
Nonag. development	80.1	7.4	9.6	0.7	2.2	100.0
Investment	28.0	4.9	25.9	27.3	14.0	100.0
Inflation hedge	35.5	8.7	29.0	16.7	10.1	100.0
Capital gains	53.5	7.6	23.6	9.0	6.3	100.0
Tax deferral rollover	69.3	8.6	12.9	5.7	3.6	100.0
Move operation	62.6	10.8	15.1	3.6	7.9	100.0
Move from city/town	48.6	6.3	12.7	14.1	18.3	100.0
No rental land	42.8	12.3	21.7	10.9	12.3	100.0
Close to property	35.5	7.1	9.9	16.3	31.2	100.0
Close to residence	38.2	7.4	16.9	17.6	19.9	100.0
Good price	10.6	8.5	30.3	26.8	23.9	100.0
Other	7.7	0.0	3.8	11.5	76.9	100.0

TABLE B.26: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Selling Agricultural Land in Alberta Between January 1, 1980 and the end of 1981 Cited by the Agricultural Land Purchasers Who Had an Off-Farm Job in 1981 Before Their Purchase of Agricultural Land in 1981

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	92.3	0.0	7.7	0.0	0.0	100.0
Urban expansion	85.7	0.0	7.1	0.0	7.1	100.0
Capital gains	50.0	7.1	21.4	7.1	14.3	100.0
Moving operation	17.6	0.0	0.0	29.4	52.9	100.0
Another job	66.7	0.0	25.0	0.0	8.3	100.0
Financing problems	40.0	0.0	20.0	13.3	26.7	100.0
Speculation	57.1	0.0	35.7	7.1	0.0	100.0
Farm too large	75.0	8.3	16.7	0.0	0.0	100.0
Changing operation	31.3	0.0	6.3	25.0	37.5	100.0
Retirement or health	84.6	7.7	7.7	0.0	0.0	100.0
Other	66.7	0.0	33.3	0.0	0.0	100.0

TABLE B.27: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Group of Agricultural Land Purchasers Who Did Not Have an Off-Farm Job in 1981 Before They Made Their Agricultural Land Purchase in 1981

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	11.3	5.4	14.0	27.0	42.3	100.0
Increase farm income	6.7	7.1	17.9	26.3	42.0	100.0
Spread fixed costs	14.5	13.2	23.6	23.6	25.0	100.0
Use machinery	15.8	11.3	25.7	26.1	21.2	100.0
Use labor	24.0	15.8	28.5	19.9	11.8	100.0
Child entering farming	34.1	9.7	19.8	17.1	19.4	100.0
Establish own farm	22.9	9.6	13.8	14.2	39.4	100.0
Second home	61.4	12.1	14.9	5.1	6.5	100.0
Recreation	82.0	9.0	5.7	1.9	1.4	100.0
Nonag. development	84.9	6.6	5.7	1.4	1.4	100.0
Investment	27.4	5.0	26.0	26.5	15.1	100.0
Inflation hedge	36.0	11.7	26.2	18.7	7.5	100.0
Capital gains	53.0	6.4	20.5	11.9	8.2	100.0
Tax deferral rollover	62.3	9.1	13.6	5.9	9.1	100.0
Move operation	64.8	9.6	11.4	5.0	9.1	100.0
Move from city/town	73.9	7.9	9.8	2.8	5.6	100.0
No rental land	43.1	14.4	18.5	13.9	10.2	100.0
Close to property	24.7	4.3	14.8	20.2	33.6	100.0
Close to residence	31.2	7.0	16.7	18.6	26.5	100.0
Good price	9.4	11.7	23.8	22.9	32.3	100.0
Other	14.3	0.0	7.1	11.9	66.7	100.0

TABLE B.28: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Selling Agricultural Land in Alberta Between January 1, 1980 and the end of 1981 Cited by the Agricultural Land Purchasers Who Did Not Have an Off-Farm Job in 1981 Before Their Purchase of Agricultural Land in 1981

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	88.6	2.3	4.5	2.3	2.3	100.0
Urban expansion	80.4	2.2	6.5	2.2	8.7	100.0
Capital gains	58.7	4.3	10.9	8.7	17.4	100.0
Moving operation	26.5	4.1	8.2	18.4	42.9	100.0
Another job	91.1	6.7	2.2	0.0	0.0	100.0
Financing problems	59.6	8.5	4.3	10.6	17.0	100.0
Speculation	67.4	6.5	8.7	10.9	6.5	100.0
Farm too large	85.4	4.2	8.3	2.1	0.0	100.0
Changing operation	40.0	2.0	4.0	28.0	26.0	100.0
Retirement or health	87.2	4.3	6.4	0.0	2.1	100.0
Other	31.8	0.0	0.0	4.5	63.6	100.0

TABLE B.29: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Group of Agricultural Land Purchasers Who Had an Off-Farm Job in 1982

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	13.5	6.7	13.5	19.6	46.6	100.0
Increase farm income	11.7	9.8	11.7	23.3	43.6	100.0
Spread fixed costs	20.5	16.1	28.0	16.1	19.3	100.0
Use machinery	20.5	15.5	21.1	26.1	16.8	100.0
Use labor	28.0	18.6	23.0	15.5	14.9	100.0
Child entering farming	39.2	14.6	16.5	13.9	15.8	100.0
Establish own farm	5.4	4.8	7.1	17.9	64.9	100.0
Second home	58.6	10.8	18.5	6.4	5.7	100.0
Recreation	71.3	12.1	10.8	4.5	1.3	100.0
Nonag. development	78.8	7.7	9.6	1.9	1.9	100.0
Investment	27.1	4.8	24.7	28.9	14.5	100.0
Inflation hedge	34.0	8.8	30.2	17.6	9.4	100.0
Capital gains	55.2	6.1	23.6	9.7	5.5	100.0
Tax deferral rollover	66.7	11.1	12.3	5.6	4.3	100.0
Move operation	61.2	11.9	13.7	3.7	9.4	100.0
Move from city/town	55.3	8.8	11.3	10.7	13.8	100.0
No rental land	40.5	14.6	20.9	11.4	12.7	100.0
Close to property	31.4	7.5	12.6	18.2	30.2	100.0
Close to residence	35.7	6.4	17.8	21.0	19.1	100.0
Good price	9.9	10.6	28.6	23.0	28.0	100.0
Other	3.6	0.0	7.1	14.3	75.0	100.0

TABLE B.30: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Selling Agricultural Land in Alberta Between January 1, 1980 and the end of 1981 Cited by the Agricultural Land Purchasers Who Had an Off-Farm Job in 1982

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	90.5	0.0	4.8	4.8	0.0	100.0
Urban expansion	86.4	4.5	4.5	0.0	4.5	100.0
Capital gains	54.5	4.5	18.2	13.6	9.1	100.0
Moving operation	33.3	0.0	0.0	33.3	33.3	100.0
Another job	75.0	5.0	15.0	0.0	5.0	100.0
Financing problems	40.9	0.0	13.6	18.2	27.3	100.0
Speculation	57.1	9.5	19.0	9.5	4.8	100.0
Farm too large	77.3	4.5	18.2	0.0	0.0	100.0
Changing operation	29.2	0.0	8.3	33.3	29.2	100.0
Retirement or health	86.4	4.5	9.1	0.0	0.0	100.0
Other	55.6	0.0	0.0	0.0	44.4	100.0

TABLE B.31: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Purchasing the First Parcel of Agricultural Land in Alberta in 1981 Cited by the Group of Agricultural Land Purchasers Who Did Not Have an Off-Farm Job in 1982

REASONS FOR PURCHASE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expand farm	11.9	3.0	13.9	27.7	43.6	100.0
Increase farm income	7.4	5.4	18.2	26.6	42.4	100.0
Spread fixed costs	14.6	12.1	21.7	25.3	26.3	100.0
Use machinery	15.9	12.4	23.9	26.9	20.9	100.0
Use labor	22.1	14.6	29.1	20.1	14.1	100.0
Child entering farming	32.7	8.5	21.1	16.1	21.6	100.0
Establish own farm	23.1	8.5	13.6	12.1	42.7	100.0
Second home	62.7	11.9	14.0	4.7	6.7	100.0
Recreation	81.5	7.4	7.4	2.6	1.1	100.0
Nonag. development	86.3	6.3	5.3	0.5	1.6	100.0
Investment	27.2	5.1	27.2	25.1	15.4	100.0
Inflation hedge	36.6	12.0	25.1	18.3	7.9	100.0
Capital gains	51.5	7.7	20.4	11.2	9.2	100.0
Tax deferral rollover	63.8	7.1	14.3	5.6	9.2	100.0
Move operation	65.8	8.7	12.2	5.1	8.2	100.0
Move from city/town	70.6	6.2	10.8	4.6	7.7	100.0
No rental land	44.3	12.9	19.1	13.9	9.8	100.0
Close to property	27.1	6.4	12.8	19.2	34.5	100.0
Close to residence	32.8	7.8	15.1	16.1	28.1	100.0
Good price	9.9	10.4	24.3	25.2	30.2	100.0
Other	17.5	0.0	5.0	10.0	67.5	100.0

TABLE B.32: 1981 Alberta Land Survey Frequency Distributions: Importance of Reasons for Selling Agricultural Land in Alberta Between January 1, 1980 and the end of 1981 Cited by the Agricultural Land Purchasers Who Did Not Have an Off-Farm Job in 1982

REASONS FOR SALE	VERY UNIMPORTANT	UNIMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	TOTAL PERCENTAGE
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Expropriation	88.9	2.8	5.6	0.0	2.8	100.0
Urban expansion	78.9	0.0	7.9	2.6	10.5	100.0
Capital gains	57.9	5.3	10.5	5.3	21.1	100.0
Moving operation	19.0	4.8	9.5	14.3	52.4	100.0
Another job	91.9	5.4	2.7	0.0	0.0	100.0
Financing problems	61.5	10.3	5.1	7.7	15.4	100.0
Speculation	69.2	2.6	12.8	10.3	5.1	100.0
Farm too large	86.8	5.3	5.3	2.6	0.0	100.0
Changing operation	42.9	2.4	2.4	23.8	28.6	100.0
Retirement or health	86.5	5.4	5.4	0.0	2.7	100.0
Other	31.6	0.0	10.5	5.3	52.6	100.0

Appendix C

TABLE C.1: 1981 Alberta Land Survey: Analysis of Age Groups, Residence Groups, Occupation Groups and Off-Farm Job Groups: Standard Deviations

VARIABLE	AGE GROUPS*		RESIDENCE GROUPS*			OCCUPATION GROUPS*		OFF-FARM JOB 1981 GROUPS*		OFF-FARM JOB 1982 GROUPS*	
	1	2	1	2	3	1	2	1	2	1	2
Age	5.0	8.5	11.6	11.4	13.9	11.6	14.9	10.4	12.0	9.9	12.1
Education	2.1	3.0	3.1	2.5	2.8	2.6	2.7	2.8	2.3	2.7	2.4
Years of farming	5.1	11.2	9.8	10.4	12.7	N/A	N/A	8.0	10.8	7.9	11.0
Years as land owner	3.7	11.2	10.7	10.1	10.8	10.2	10.0	8.0	10.8	7.7	10.9
Parcel-total acreage	396.8	583.2	334.6	564.0	242.3	555.1	266.7	472.5	531.7	290.8	557.8
Parcel-cultivated acreage	333.2	392.1	292.7	419.5	228.4	418.5	170.3	266.3	432.6	258.9	406.4
Parcel-market value	494.1	904.5	1252.7	529.4	1764.0	739.5	454.6	911.9	611.2	928.4	575.4
Parcel-distance to city	51.3	62.5	48.5	59.6	38.4	56.7	67.7	62.8	51.3	54.8	57.2
Reasons for Purchase											
Expand farm	1.5	1.4	1.6	1.4	1.6	1.4	1.6	1.4	1.3	1.4	1.3
Increase farm income	1.4	1.4	1.6	1.3	1.6	1.3	1.6	1.4	1.2	1.4	1.2
Spread fixed costs	1.4	1.4	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.4	1.4
Use machinery	1.4	1.4	1.5	1.3	1.6	1.4	1.2	1.4	1.3	1.4	1.4
Use labor	1.4	1.4	1.4	1.4	1.5	1.4	1.2	1.4	1.3	1.4	1.3
Child entering farming	1.4	1.5	1.6	1.5	1.7	1.5	1.5	1.5	1.5	1.5	1.6
Establish own farm	1.2	1.6	1.4	1.5	1.4	1.4	1.4	1.0	1.6	1.1	1.6
Second home	1.1	1.4	1.3	1.2	1.5	1.2	1.1	1.2	1.2	1.2	1.2
Recreation	0.8	1.1	1.2	0.9	1.5	0.9	1.4	1.0	0.8	0.9	0.8
Nonagricultural development	0.8	1.0	1.3	0.8	1.5	0.8	1.4	0.9	0.8	0.9	0.7
Investment	1.4	1.4	1.4	1.4	1.4	1.4	1.2	1.4	1.4	1.4	1.4
Inflation hedge	1.3	1.4	1.4	1.4	1.5	1.4	1.3	1.4	1.3	1.4	1.4
Capital gains	1.3	1.4	1.4	1.4	1.5	1.4	1.4	1.3	1.4	1.3	1.4
Tax deferral rollover	1.1	1.4	1.4	1.2	1.5	1.3	1.2	1.1	1.3	1.1	1.4
Move farm operation	1.2	1.4	1.4	1.3	1.3	1.3	0.9	1.3	1.3	1.3	1.3
Move from city/town	1.5	1.4	1.4	1.5	1.5	1.4	1.4	1.6	1.1	1.5	1.3
No rental land	1.4	1.4	1.4	1.4	1.5	1.4	1.1	1.4	1.4	1.4	1.4
Close to property	1.6	1.7	1.7	1.6	1.8	1.6	1.6	1.7	1.6	1.7	1.6
Close to residence	1.6	1.7	1.5	1.6	1.6	1.6	1.4	1.6	1.6	1.6	1.6
Good price	1.2	1.3	1.3	1.3	1.3	1.3	1.1	1.2	1.3	1.3	1.3
Other reasons	1.5	1.4	1.3	1.4	2.0	1.4	1.5	1.4	1.4	1.3	1.5

TABLE C.1 CONTINUED: 1981 Alberta Land Survey: Analysis of Age Groups, Residence Groups Occupation Groups and Off-Farm Job Groups: Standard Deviations

VARIABLE	AGE GROUPS*		RESIDENCE GROUPS*			OCCUPATION GROUPS*		OFF-FARM JOB 1981 GROUPS*		OFF-FARM JOB 1982 GROUPS*	
	1	2	1	2	3	1	2	1	2	1	2
Prior acres owned	542.7	1470.0	1094.9	1138.2	1151.5	1140.8	1002.1	645.8	1344.5	635.8	1384.4
Following acres owned	668.8	1803.1	1078.4	1411.1	964.2	1383.4	1096.4	732.7	1595.4	746.1	1638.2
Prior acres rented	720.9	664.9	805.3	672.4	239.9	724.9	211.5	560.7	810.4	605.0	805.3
Following acres rented	691.8	669.4	786.7	660.0	348.6	708.4	230.3	600.6	771.2	579.9	792.1
Total acres purchased 1981	422.6	589.2	359.8	479.9	644.5	568.4	426.7	483.3	548.4	324.9	570.3
Total acres sold	298.4	652.1	526.6	644.5	479.9	516.2	90.7	565.1	491.3	362.0	563.2
Reasons for Sale											
Property expropriated	0.4	1.0	0.6	0.8	1.1	N/A	N/A	0.5	0.8	0.0	0.9
Urban expansion	0.5	1.6	1.3	1.3	2.0	N/A	N/A	1.1	1.3	1.4	1.2
Capital gains	1.4	1.7	1.3	1.6	1.5	N/A	N/A	1.5	1.6	1.1	1.7
Move farm operation	1.7	1.6	1.4	1.7	1.1	N/A	N/A	1.5	1.7	1.7	1.6
Another job	0.9	0.7	1.3	0.6	1.2	N/A	N/A	1.3	.4	1.2	0.6
Financial problems	1.6	1.7	1.7	1.6	1.2	N/A	N/A	1.7	1.6	1.4	1.7
Speculation	1.4	1.4	1.3	1.4	1.6	N/A	N/A	1.1	1.3	1.3	1.3
Farm too large	0.7	0.8	0.9	0.7	1.2	N/A	N/A	0.8	0.7	0.6	0.7
Changing farm operation	1.7	1.7	1.6	1.7	1.0	N/A	N/A	1.7	1.7	1.8	1.7
Retirement, health	0.6	1.1	1.5	0.5	1.6	N/A	N/A	0.6	0.8	0.4	0.8
Other reasons	2.0	1.8	1.4	1.9	0.0	N/A	N/A	1.0	1.9	1.6	1.9
Financing Sources											
Own funds	25.9	39.3	36.4	34.4	35.0	33.5	41.0	29.7	35.6	30.5	35.2
Banks etc.	34.7	38.3	36.7	36.7	35.7	36.7	37.5	33.1	38.9	33.4	39.2
AADC	47.3	22.7	27.0	45.4	14.5	44.6	27.3	46.3	42.8	46.1	43.2
FCC	25.6	22.7	17.9	25.6	12.1	25.5	10.2	22.3	27.8	24.5	26.8
FBDB	2.7	3.7	0.0	3.5	0.0	3.4	0.0	0.0	4.4	0.0	4.6
Seller	20.4	20.3	27.7	17.8	28.2	20.0	22.6	21.1	19.5	23.1	16.8
Family	17.9	16.7	9.3	18.7	13.2	18.0	11.5	18.0	18.3	17.7	18.6
Other sources	0.0	17.7	0.0	13.2	0.0	11.7	14.4	7.3	14.0	7.3	14.4

*Age groups: (1)Young (2)Old
Residence groups: (1)Rural (2)Urban (3)City
Occupation groups: (1)Agricultural (2)Non-agricultural
Off-farm job 1981 groups: (1)"Did" (2)"Did Not"
Off-farm job 1982 groups: (1)"Did" (2)"Did Not"

TABLE C.2: 1981 Alberta Land Survey: Analysis of Sales Groups, Mean Size Groups, Median Size Groups, and Ripple-Effect Groups: Standard Deviations

VARIABLE	SALE GROUPS*		MEAN SIZE GROUPS*		MEDIAN SIZE GROUPS*		RIPPLE EFFECT GROUPS*	
	1	2	1	2	1	2	1	2
Age	11.1	12.2	11.4	10.9	11.7	11.4	10.9	12.7
Education	2.5	2.8	2.6	2.3	2.6	2.5	2.4	2.5
Years of farming	10.4	9.8	8.3	11.1	6.9	11.4	8.5	10.3
Years as land owner	9.8	9.7	7.8	10.8	6.9	10.7	7.9	10.5
Parcel–total acreage	450.4	746.4	192.4	818.5	116.6	636.3	522.3	584.7
Parcel–cultivated acreage	346.9	542.6	156.0	596.9	93.3	469.4	471.4	541.2
Parcel–market value	680.2	859.0	834.1	376.2	728.6	713.2	587.0	977.3
Parcel–distance to city	61.8	39.8	60.2	56.1	45.7	66.4	36.1	39.9
Reasons for Purchase								
Expand farm	1.5	1.5	1.5	1.3	1.6	1.3	1.5	1.6
Increase farm income	1.4	1.4	1.6	1.2	1.5	1.3	1.4	1.5
Spread fixed costs	1.4	1.4	1.4	1.4	1.5	1.4	1.3	1.4
Use machinery	1.4	1.5	1.4	1.4	1.4	1.4	1.3	1.6
Use labor	1.4	1.5	1.4	1.4	1.3	1.4	1.3	1.5
Child entering farming	1.5	1.6	1.5	1.6	1.4	1.4	1.5	1.6
Establish own farm	1.4	1.4	1.2	1.6	1.1	1.6	1.5	1.8
Second home	1.2	1.2	1.2	1.2	1.2	1.2	0.9	1.3
Recreation	0.9	1.0	0.9	1.1	1.0	0.9	0.8	1.0
Nonagricultural development	0.9	0.8	0.8	0.9	0.9	0.8	0.7	1.0
Investment	1.4	1.4	1.4	1.5	1.3	1.5	1.5	1.5
Inflation hedge	1.3	1.5	1.3	1.5	1.3	1.4	1.5	1.5
Capital gains	1.3	1.5	1.3	1.4	1.3	1.4	1.5	1.5
Tax deferral rollover	1.1	1.6	1.2	1.4	1.2	1.3	1.6	1.7
Move farm operation	1.0	1.6	1.3	1.3	1.2	1.3	1.3	1.7
Move from city/town	1.5	1.3	1.5	1.2	1.5	1.3	1.6	1.1
No rental land	1.4	1.3	1.4	1.4	1.4	1.4	1.3	1.3
Close to property	1.6	1.7	1.6	1.6	1.6	1.7	1.3	1.8
Close to residence	1.6	1.5	1.6	1.6	1.5	1.7	1.3	1.6
Good price	1.2	1.3	1.3	1.3	1.5	1.4	0.9	1.4
Other reasons	1.4	1.6	1.4	1.4	1.5	1.4	0.5	1.8

TABLE C.2 CONTINUED: 1981 Alberta Land Survey: Analysis of Sales Groups, Mean Size Groups, Median Size Groups, and Ripple Effect Groups: Standard Deviations

VARIABLE	SALES GROUPS*		MEAN SIZE GROUPS*		MEDIAN SIZE GROUPS*		RIPPLE EFFECT GROUPS*	
	1	2	1	2	1	2	1	2
Prior acres owned	1158.7	956.6	350.2	1631.7	212.9	1373.7	1086.4	985.6
Following acres owned	1431.8	1013.1	214.9	1922.8	101.0	1614.9	683.8	1031.0
Prior acres rented	685.3	767.7	548.0	945.5	428.9	840.5	479.8	908.4
Following acres rented	632.9	877.7	517.3	946.4	407.3	827.3	581.0	908.2
Total acres purchased 1981	483.1	751.8	201.4	837.9	142.6	655.7	831.2	619.0
Total acres sold	0.0	487.4	306.9	654.5	181.4	566.7	831.1	834.3
Reasons for Sale								
Property expropriated	N/A	N/A	1.0	0.4	1.1	0.6	1.0	0.7
Urban expansion	N/A	N/A	1.1	1.3	1.1	1.2	1.2	1.4
Capital gains	N/A	N/A	1.4	1.8	1.3	1.7	1.7	1.5
Move farm operation	N/A	N/A	1.7	1.6	1.7	1.6	1.0	1.7
Another job	N/A	N/A	0.7	0.8	0.9	0.7	0.8	0.8
Financial problems	N/A	N/A	1.7	1.5	1.8	1.5	1.4	1.7
Speculation	N/A	N/A	1.3	1.5	1.4	1.4	1.4	1.4
Farm too large	N/A	N/A	0.7	0.7	0.8	0.7	1.0	0.6
Changing farm operation	N/A	N/A	1.7	1.8	1.7	1.8	1.6	1.7
Retirement, health	N/A	N/A	0.7	0.7	0.8	0.7	0.8	1.0
Other reasons	N/A	N/A	1.8	1.8	1.7	1.8	1.8	1.9
Financing Sources								
Own funds	30.7	37.4	34.2	35.5	35.4	34.0	37.2	38.4
Banks etc.	37.9	30.2	33.3	41.3	34.5	38.4	30.2	31.3
AADC	45.7	30.0	46.6	24.7	46.4	40.7	24.1	31.7
FCC	26.8	10.6	23.6	26.2	21.6	26.3	13.8	3.1
FBDB	0.0	7.2	0.0	5.9	0.0	4.3	0.0	8.8
Seller	19.9	19.8	20.6	21.1	21.5	20.2	27.8	17.2
Family	17.9	12.0	17.0	17.5	16.7	18.2	0.0	14.8
Other sources	13.0	0.0	6.6	19.9	4.6	15.8	0.0	0.0

*Sales groups: (1)"Did Not Sell" (2)"Did Sell"
Mean size groups: (1)–936 Acres (2)936+ Acres
Median size groups: (1)–480 Acres (2)480+ Acres
Ripple effect groups: (1)"Further" (2)"Closer"

TABLE C.3: 1981 Alberta Land Survey
Analysis of Sources of Financing Used, and Not Used, to Purchase Agricultural Land in Alberta, in 1981:
Standard Deviations

SOURCES AND SELECTED VARIABLES	STANDARD DEVIATIONS: "DID NOT USE" THIS SOURCE	STANDARD DEVIATIONS: "DID USE" THIS SOURCE
Own Funds:		
Own funds	0.0	34.6
Bank	41.7	32.1
AADC	49.2	30.1
FCC	31.9	14.1
Seller	21.7	19.0
Family	22.9	10.3
Banks:		
Own funds	39.8	23.9
Bank	0.0	27.7
AADC	47.0	10.8
FCC	29.0	6.3
Seller	23.4	11.5
Family	19.9	10.5
AADC:		
Own funds	38.1	13.4
Bank	40.1	0.9
AADC	0.0	18.6
FCC	28.6	8.9
Seller	23.8	7.0
Family	20.6	5.9
FCC:		
Own funds	36.2	27.8
Bank	38.2	13.6
AADC	45.1	24.9
FCC	0.0	37.1
Seller	21.0	14.2
Family	18.5	3.7
Seller:		
Own funds	36.7	20.6
Bank	37.7	25.5
AADC	44.9	15.1
FCC	25.5	8.4
Seller	0.0	27.5
Family	18.2	6.1
Family:		
Own funds	36.1	22.3
Bank	37.6	22.6
AADC	44.3	33.2
FCC	24.9	16.3
Seller	20.6	16.9
Family	0.0	35.9

TABLE C.3 CONTINUED: 1981 Alberta Land Survey
Analysis of Sources of Financing Used, and Not Used, to Purchase Agricultural Land in Alberta, in 1981:
Standard Deviations

SOURCES AND SELECTED VARIABLES	STANDARD DEVIATION: "DID NOT USE" THIS SOURCE	STANDARD DEVIATION: "DID USE" THIS SOURCE
Own Funds:		
Age	10.6	12.1
Years of farming	9.3	11.0
Years as land owner	8.4	10.8
Parcel–total acreage	540.7	508.8
Parcel–market value	366.7	948.8
Prior acres owned	969.2	1268.4
Following acres owned	1159.7	1566.3
Banks:		
Age	11.9	11.3
Years of farming	8.9	11.6
Years as land owner	8.9	11.0
Parcel–total acreage	461.6	628.9
Parcel–market value	808.1	593.0
Prior acres owned	949.5	1377.3
Following acres owned	1120.1	1765.6
AADC:		
Age	11.6	6.5
Years of farming	10.8	6.0
Years as land owner	10.6	4.1
Parcel–total acreage	529.2	511.7
Parcel–market value	857.2	394.6
Prior acres owned	1328.5	173.3
Following acres owned	1622.1	514.5
FCC:		
Age	12.3	10.2
Years of farming	10.3	10.3
Years as land owner	10.2	7.6
Parcel–total acreage	542.4	367.4
Parcel–market value	781.2	358.4
Prior acres owned	1211.6	480.7
Following acres owned	1480.9	487.9
Seller:		
Age	12.2	9.8
Years of farming	10.6	8.2
Years as land owner	10.2	7.6
Parcel–total acreage	543.6	299.9
Parcel–market value	518.6	1647.6
Prior acres owned	1133.1	1233.1
Following acres owned	1416.1	1216.3
Family:		
Age	12.1	10.2
Years of farming	10.5	8.0
Years as land owner	10.1	7.4
Parcel–total acreage	500.3	705.7
Parcel–market value	765.5	408.9
Prior acres owned	1149.5	1094.3
Following acres owned	1398.8	1359.2

Appendix D

Comments Made by the Survey Respondents

Given in the following paragraphs are several statements provided by respondents to the 1981 Alberta Land Survey in response to two questions which dealt with factors which may have influenced the price of agricultural land in 1981 and with comments on the agricultural land market in Alberta in general.

Some respondents suggested that beginning farmers are the cause of high agricultural land values. For example:

> High land values are caused by the ease of borrowing large sums of money by first time farmers.

On the other hand, more established farmers were blamed by some for outbidding younger farmers. Examples of comments in this regard were:

> Farmers with lots of land keep prices up and reduce competition.

> Older (richer) farmers only buy land if they can do so without borrowing and they can afford to pay more. Young farmers are too optimistic and know little about debt.

> Very soon only farmers with large equity will be able to make land purchases. Because price escalations are due to investment expectations (due to inflation) rather than what the land can actually produce, new beginning farmers are going to find it increasingly difficult to make their investment pay.

Many respondents noted the problems encountered in making a farmland purchase pay for itself. Examples of comments follow:

> It appears to me that it is impossible to have a viable farming operation without owning outright at least as much land as you are financing, or renting twice as much as you are purchasing.

> At the price of land today you must have other land to help pay for it.

> The economics of purchasing land are very poor (dollar return/dollar invested).

> Even established farmers have problems paying for land. Only farmers who have paid 100 percent for their land are okay.

As one other respondent phrased it:

> Real estate speculation has pushed land prices, including agricultural land, well beyond its reasonable value in terms of its ability to pay its way from agricultural production.

In terms of production, one individual's suggestion was that:

> Land prices should not be tied to real estate prices but to production, to make farming more viable.

One respondent felt the following way about the competition he face in buying land:

> Inflationary conditions have prompted investment in land rather than in other things. Hobby farmers and professional people purchasing land tend to push

the price higher than what the land is worth to a bonafide farmer. He has to compete or is unable to expand and stay in business.

High land costs were often felt to be caused by foreigners, cooperatives, speculators, and investors. In this regard, one respondent stated that:

> Land is being bought by money syndicates (Italian, German, French). They don't care if it's farmed. It's just a tax dodge.

One purchaser felt that:

> most purchases seem to be by people who have some additional source of income.

Along these same lines, one respondent commented:

> A farm provides a meal ticket since jobs are hard to find. It becomes necessary to subsidize the farm with off-farm income.

In terms of financing, many respondents felt that

> FCC, FBDB and AADC are a farce. Qualification is too difficult and processing is too slow.

Others felt, however, that without these financial institutions, their purchase of agricultural land would have been impossible.

One individual noted, as a comment on the agricultural land market in Alberta:

> The value of agricultural land is different for everyone. You cannot fix figures of value - it depends on demand and demand depends on willingness to pay, not on net return.

Another respondent wrote

> Every piece of land differs in value depending on what type of soil it is, condition of the land (rocks, weeds, swamp), closeness to primary highway, availability of water, power, and phone.

Some respondents provided recommendations on various topics of land purchase and ownership. Examples are:

> There must be some way to ensure that those who buy land must farm it. This may help relate the price of land to its value in production.
>
> Better financing plans should be established for all levels of agriculture.
>
> Government funds which are made available to purchase property should be based on productive value.
>
> I am grateful to be a participant in the AADC beginner loan program, for without it I doubt if I could own any land. An irony exists for those for whom the program has expired. They face a doubling of payments with lower returns for all crops. They might have been better off not buying. I suggest careful monitoring of the situation and possibly an extension of this program.
>
> Rented land is mismanaged because of the instability of tenure. Government owned land, with a guaranteed tenure for beginning farmers, would be a positive alternative.

It's hard to make interest payments never mind payments on principal. Reasonable interest rates and longer fixed term loans would make purchasing land easier.

Work on land transfer systems and financing through Agricultural Bonds, FCC, AADC, and Small Business Development Bonds is required. Beginning farmers can be helped through rough times with low interest and longer terms.